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THE  
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OF  
The British Dental Association.

A  
MONTHLY REVIEW OF DENTAL SURGERY.



JANUARY TO DECEMBER, 1890.

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**SPECIAL NOTICE.**—All communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
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**The New Year.**

"OF the many pleasantly illusive resolves in which men from time to time indulge, none are so pleasant, and few have such large possibilities of realisation, as those which are annually formed just when Time, playing the part of a fashionable host, 'lightly shakes the parting guest by the hand, and with new joy grasps in the tomer.'"

The editorial "we"—hovering as a vague abstraction round the editorial chair—may perhaps be free from such dreams, but the actual occupant, mortal like other men, has the same regrets and good resolves as they, and finds the like satisfaction in putting them on record.

The JOURNAL OF THE BRITISH DENTAL ASSOCIATION, as it enters on a new year of its literary life, has the satisfaction of knowing that it holds its own as well as ever, notwithstanding the crush of journalists—

"Luminous, voluminous,  
The twice ten thousand daily scribes,  
Whose quartos, folios, newspapers illumine us."

It hopes to do more than hold its own in the year to come, and with a view to better merit the approbation of the profession, purposes avoiding some faults to which friendly criticism has called attention, and adopting some improvements, the outcome of kindly suggestions. Following on the change of publishers—Messrs. Baillière, Tindall and Cox, of 20, King William Street, Strand, will henceforth issue the publication—will come a more complete revision of the advertising columns, whereby further annoyance to members by reason of the character of some of the advertisements which have appeared in past numbers will be avoided. As regards the letterpress, it will be our endeavour to remedy a not unreasonable occasional complaint of the dearth of attractive matter in our news column. We have always done our best in this direction, and should, we think, in this particular be justified in answering our critic as Cardinal Cullen did the young man who expressed doubts about Purgatory, "Friend, you might go further and fare worse." We shall, however, make renewed efforts in this direction, and—if we can overcome the stolid resoluteness with which the members of the profession refuse to aid us—shall succeed. For, after all, the only people who can supply those short paragraphs which come from all corners are the readers of the Journal, and the difficulty of the Publishing Committee is how to convince everybody that everybody's business is the business of each. To the "office for pleasant inventions," which manufactures gossip and lets chance decide its geographical location, a professional journal cannot fly for help, and unless each member will be willing to tell his good story, or offer his happy suggestion to his fellows



through the medium of the Journal, much reform in this direction cannot be compassed.

In larger matters, such as the discussion of new inventions and the description of new materials—in respect of which responsibility rests more entirely on the Publishing Committee—we hope to make a decided advance. We shall present in particular some original studies of normal and pathological anatomy, illustrated by microphotography of a specially good kind. We may add in this connection that nothing is wanting to the realisation of the excellent suggestion made by some ardent spirits at Brighton last autumn—we mean a microscopical column—except the co-operation of members. We shall be only too ready to publish as soon as we receive any matter; the smallest items, provided they be practical, would be of as much, or more value, than lengthy contributions.

One of our difficulties arises in connection with the desire to report meetings of the Association if not as fully as the speakers thereat desire, at least at reasonable length, and yet find room for scientific intelligence without increasing the size, and consequently the postage, of our Journal. In order to do this we shall print our reports of meetings in a smaller type.

If our readers should detect in what we have written a certain flavour of complaint, let them remember that the onus of producing the monthly issue is no light one, and that while we feel it our duty to register the thoughts and aspirations of our members, we feel that it is due to us that all the help that our members can send us should be forthcoming. It is our lot to be always subject to criticism, and therefore we may feel ourselves at liberty once and again to criticise our readers.

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**The Partridge Case.**

WE publish on another page as full an abstract as the exigencies of space allow of what we imagine will prove to be the last stage of this litigation. Seeing that the most egregiously mistaken accounts of this case are from time to time (perhaps quite innocently) allowed to mislead the lay public, we may be forgiven for briefly running over the main features of the history of the case. Partridge obtained admission to the Dental Register by virtue of the possession of the licentiateship in dental surgery of the Royal College of Surgeons in Ireland. The Irish College subsequently being informed that Partridge was in the habit of advertising (contrary to an agreement entered into on taking his diploma from the College), remonstrated, and finally withdrew their diploma. The General Medical Council finding that the title by which Partridge had obtained admission to the register had been annulled, erased his name from the register. Partridge applied for, and obtained, a mandamus against the Council to compel them to restore his name to the register. The Court directed the Council to restore his name, on the ground that they had merely acted upon the decision of the Irish College, without themselves causing enquiries to be made into the case as directed by Section 13 of the Dentists Act, which empowers them to cause the name of a person to be erased from the Register on proof of infamous or disgraceful conduct in a professional respect on the part of such person, after they have caused inquiry to be made into his case. Partridge's name was accordingly restored to the Register, but the Council, having subsequently, after a formal enquiry, arrived at the conclusion that he had been guilty of disgraceful conduct in advertising contrary to the undertaking given by him when he received his diploma, again caused his name to be erased from the Register. Partridge

recently instituted proceedings against the Council to recover compensation for loss and damage alleged to have been incurred by him during the period which elapsed between the first erasure of his name from the Register and its subsequent restoration as directed by the Court. In these proceedings he claimed that his income had suffered from the erasure of his name from the Register, and that the payment of moneys due to him for dental work had been successfully refused on the ground that not being registered he was unable to enforce his claim for professional fees in a court of law. He failed, however, to prove malice on the part of the General Medical Council, and accordingly lost his case, subject to a possible appeal.

We have preferred to incur the charge of boring our readers with what might fairly be described as a twice-told tale rather than allow wild and unreliable statements to pass current without a word of contradiction. In a provincial contemporary we read with some amusement, that Partridge had defeated the Council, and in fact had all things his own way until this last phase, the action for damages! Yet our contemporary, like all the rest of the world, had access to the facts of the case, and might have informed itself, as easily as we, that the courts had finally upheld the Council in the erasure of Partridge's name before this suit for damages came on; by so informing themselves they might have avoided misleading and mis-informing the public on a point of some public importance.

So far, then, the law of the land has upheld and justified the action of the General Medical Council in this case, and feeling convinced that the action of the Council has been dictated by nothing but a fair and just desire to procure the proper administration of the Dentists Act we rejoice at their success, and believe our satisfaction will be re-echoed by the greater part of the profession.

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## ASSOCIATION INTELLIGENCE.

### Irish Branch.

THE General Meeting of the Irish Branch of the British Dental Association will take place on Thursday, January 30th, in the Royal College of Surgeons in Ireland for the election of officers and Council, at four o'clock p.m. The outgoing Council have nominated J. C. Clarke (Belfast), President; R. Hazelton (Dublin), Vice-President; A. T. Thomson (Dublin), Treasurer; W. Booth Pearsall (Dublin), Hon. Secretary. All the outgoing members of Council are eligible for re-election. Mr. P. O'Meehan has been recommended for election as member of Council for Limerick.

### Midland Counties Branch.

A MEETING of the Members and Associates will be held at the Literary and Philosophical Society's Rooms, Museum Street, Warrington, on Saturday, February 1st, at six o'clock.

Thos. Fletcher, Esq., F.C.S., will read a paper on "The Use of Gas in the Dental Laboratory," with experiments. He also expects to have ready "A New Automatic Continuous Gum Furnace." T. M. Howkins, Esq., will read a paper on "Some Improvements in Pins and Tubes for Pivot Teeth."

Mr. Fletcher has kindly offered to open his works in Thynne Street to members desirous of inspecting them; those wishing to do so must meet in the Library of the Museum at four o'clock. The Curator of the Museum has also consented to throw open the "Art Gallery" to the Members, which will be closed to the public for the time being.

Mr. Thos. Fletcher and Mr. John Taylor invite the members to Tea in the Lecture Room of the above institution at five o'clock. Entrance from Museum Street.

Mr. Fletcher writes:—"I think I shall take over to the meeting my collection of difficult and rare castings in iron, bronze and pewter—examples of every known process of casting. As regards the meeting, we shall have the suite of rooms connected with the Art Gallery. The works' 'band' will also be in attendance to play selections during the evening."

I. RENSHAW, *Hon. Sec. pro tem.*,  
Drake Street, Rochdale.

## LEGAL INTELLIGENCE.

**Partridge v. the General Council of Medical Education and Registration of the United Kingdom.**

IN this action the plaintiff sued the defendants, who are a *quasi-judicial* body taking their powers under the Medical Act (21 and 22 Vict., c. 90), to recover damages, alleging that they had wrongfully and maliciously caused his name to be taken off the register in June, 1886, and to remain off until ordered by writ of *mandamus* to reinstate it in September, 1887, and that during that period a number of his customers had refused to pay their accounts on the ground that under the Dentists Act, 1878 (41 and 42 Vict., c. 33), the plaintiff's name not being upon the register, he could not at law recover his fees. The defence was in substance that the defendants, as a judicial body, had had certain matters connected with the plaintiff's professional conduct brought before them to decide, and that although the Court of Appeal had decided that their decision had been wrong, yet it was arrived at *bonâ fide* and without malice, and that therefore they were not liable in damages to the plaintiff for their mistake in exercising their discretion.

Mr. Waddy, Q.C., and Mr Lyon were for the plaintiff; and Mr. R. T. Reid, Q.C., and Mr. Muir Mackenzie appeared for the defendants.

MR. WADDY opened the case, and called the plaintiff, Mr. H. F. Partridge, who said he practised as a dentist at Sussex-house, Sussex-place, Old Brompton-road, and had done so for 20 years. In 1866 he was apprenticed to one John Davies, a dentist. He was four years with him learning the mechanical portion of the profession. In 1869 he started on his own account as a dentist in Baker-street, and from there he went to his present address. In 1878 he had entered his name at the Dublin Dental College. In that year the Dentists Act was passed compelling registration, and so he wished to become a licentiate in dental surgery of the Royal College of Surgeons in Ireland. Witness went to Dublin and passed the required examinations, and received a diploma, at the same time signing a declaration that while he held it he would not advertise in order to benefit his practice as a dentist, under the penalty of having the diploma cancelled. In February, 1882, he had gone to bed quite well in health, and awoke the next morning totally blind, and he had been so ever since. In order to obtain a

living he had formed the South Kensington Ladies' Dental Institute. He had, in fact, advertised that institution. He had found it, for reasons, necessary to do so. Asked, Is the practice common and allowed by the dental profession?

Mr. REID here objected, and said that the defendants had not removed the plaintiff's name from the register on June 2, 1886, because of his advertising, but because of his having violated the undertaking he had given not to do so upon receipt of his diploma in Dublin. The plaintiff sought to recover damages in respect of the interval between June 2, 1886, and September, 1887, at which date the Medical Council had reinstated him by order of the Court of Appeal on the *mandamus*, and the plaintiff must confine his evidence to that period. The case of "*Ex Parte Partridge*," when the plaintiff's *mandamus* was considered by the Court of Appeal (L.R. 19, Q.B.D. 467), was referred to as showing what the Court had really decided in that case.

Mr. BARON HUDDLESTON, having looked at the pleadings and the case referred to, said that Mr. Reid's contention was right, and evidence as to advertising by other dentists was not admissible.

Examination continued: He had received a copy of the resolution of the Medical Council of Education of Ireland in July, 1885, and a notification that they had again had under their consideration the fact of his advertising his institution, and that his diploma was cancelled. On July 11 witness replied to that. On June 8, 1886, he received a letter from the General Medical Council of Education in England informing him that a meeting of that council, "after due and careful consideration, had decided that his name should be removed from the register." Witness applied to the Court thereupon for a *mandamus* questioning that decision, and in the result the Court of Appeal ordered his name to be reinstated, and it was, in September, 1887. During the time that his name was off the register he had been unable to sue for or recover any fees. During that time a number of his patients refused to pay him his fees. His out-of-pocket expenses over the whole matter, including his solicitor's costs, had been £36 odd.

Cross-examined: The plaintiff's income increased during the time his name was off the register. The bad debts during the two periods were within £42 of each other. In the list of debtors in the statement of claim he had included all the bad debts of the year in question. With the exception of one instance it was the case that not one of the debtors set up the fact of the plaintiff's

being struck off the register as a reason for not paying their account, but he inferred that if sued they would set up the Dentists' Act as a defence. Witness admitted that in the list in the plaintiff's claim of persons who set up the statute as a reason for not paying there were included some names of debtors who refused to pay on the alleged ground of a want of skill or on grounds of that nature. All the time that the plaintiff was off the register he had advertised as if he were on the register. During that period witness had seen the fact that the plaintiff was off the register in some of the papers.

Where?—I think about July or August of 1886 in the *Figaro*.

The solicitor who conducted the plaintiff's *mandamus* proceedings said that his bill of costs as between solicitor and client was £36 odd, of which £22 was counsel's fees.

That closed the plaintiff's case.

Mr. R. T. REID then said that as there was no evidence of malice here this action could not be maintained. There was no case in which the defendants were exactly such a body as the defendants in this case, but in the case of "*Tozer v. Child*" (7 E. and B., 377), the defendants, who were churchwardens, were in an analogous position, and it was there held that in a *quasi-judicial* body it was necessary to prove malice in order to maintain a claim of this nature.

Mr. WADDY, for the plaintiff, argued that the defendants had gone entirely beyond the powers given them by the Legislature, and were therefore liable in damages, there being in fact legal or constructive malice.

Mr. BARON HUDDLESTON said he might say at once that he was prepared to decide that this action would not lie unless malice were proved, and he would therefore suggest that the jury should be discharged and it be left for his decision, in which event either party could go direct to the Court of Appeal.

Mr. WADDY said his client wished the matter to go to the jury.

Mr. BARON HUDDLESTON : But I will not permit it. I have told you I am going to decide the matter at once.

Mr. WADDY : Then I can say no more, my Lord.

Mr. BARON HUDDLESTON then gave judgment for the defendants, holding that there was no evidence of malice on the part of the defendants, and that therefore the action did not lie. In reviewing the facts, the learned Baron observed that the defendants, when the matter of the plaintiff's conduct in respect of the

violation of his agreement not to advertise was brought to their notice, had taken his name off the register, and subsequently, by order of the Court of Appeal, they had had to reinstate it. But for this were the defendants liable to an action? He did not think it required authority to establish that where persons in a *quasi-judicial* capacity exercised their discretion wrongly no action could be maintained against them for such a decision unless it could be shown that they arrived at their decision maliciously. Here there was no evidence at all of malice, and the plaintiff must therefore be non-suited and judgment entered for the defendants.

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**Leeson v. The General Council of Medical Education and Registration and Marshall.**

THIS was a motion brought in the High Court of Justice, Chancery Division, before Mr. Justice North, on Friday, the 13th Dec., on the part of Mr. Joseph Frederick Leeson, a physician, to restrain the General Council of Medical Education and Registration from removing his name from their register of general practitioners until the trial of the action, and from publishing resolutions passed by them on Nov. 28th, 1889, to the effect that he, Mr. Leeson, had been guilty of infamous conduct in a professional respect, or their direction to their registrar to erase his name.

Mr. COZENS-HARDY, Q.C., and Mr. GEORGE HENDERSON, for the plaintiff, in support of the motion, said they could not, on the authorities, ask his lordship to go behind the finding of the Council if it was a matter within their jurisdiction regularly and *bonâ-fide* conducted. They contended, however, that the inquiry was bad for several reasons—that their own rules had not been complied with; that the inquiry was (as they said) as to whether Mr. Leeson had covered Mr. Harness in acting as medical electrician, a matter he had a right to do; that it was directed against Harness while professedly made into the conduct of Leeson; and that two of the judges were incapacitated so as to vitiate the whole inquiry, because they were members of the Medical Defence Union.

Mr. EVERITT, Q.C., and Mr. MUIR MACKENZIE, for the Council, contended that the proceedings had been honestly and regularly conducted, and the Court could not go behind the finding of the Council



MR. JUSTICE NORTH, on the question of the construction of the letter formulating the charge against Mr. Leeson, which he observed had not been very happily expressed, came to the conclusion that the plain meaning of the charge was that Mr. Leeson had been acting as cover for Mr. Harness, not merely as a medical electrician, but as a person acting as a registered practitioner; and so it had been understood and acted upon by all persons who had anything to do with the inquiry. Had it been otherwise it would have been in his power, and would have been his duty, to interfere. It being, however, an inquiry as to whether Mr. Leeson had acted as cover for an unqualified person to act as a registered practitioner, it was a matter in which, in his lordship's opinion, the Medical Council were alone the judges, and which he ought not and could not judge of subject to their acting regularly and *bonâ fide*. Upon this part of the case it was said that a standing order or rule had been made on the very day of the inquiry for the mode of conducting such inquiries, and at first sight that did look strange; but, on looking at what was actually done, he was convinced that the rules were only what ought to have been made, and the inquiry would have been conducted in the same way if the rules had not been made. Another matter of complaint dealt with by his lordship was that the mode of conducting the inquiry laid down by the Council's standing orders had been departed from by allowing the solicitor of the Medical Defence Union to take it up at a certain point. That, his lordship thought, was within their power, and was not prejudicial or unfair to the person accused. Another point taken on the part of the applicant was that certain matters had been before the Council in the inquiry that were not evidence. The Council, he pointed out, were not in a position to administer oaths, and could not be guided only by what would be strict evidence in a court of law. He did not consider that the proceedings were in any way invalidated by such a cause as that. There was another point on which he had some hesitation, it being a point of law, as to whether, the parties having a right to have it decided at the hearing, he ought not to postpone it, and there was a question for the trial whether the injunction ought not to go; but being satisfied, as he felt, that on other grounds there was no case for an injunction, he took upon himself the decision of what was a point of law at this stage. The point was whether the judicial proceed-

ings of the Council were invalidated by reason of two members out of some thirty who sat on the investigation being interested parties. If they were interested, it was clear law that the proceedings would be invalidated ; but was it necessary that their interest should be a pecuniary interest for that result to follow ? In this case the two members of the Council were subscribers to the Medical Defence Union of ten shillings a year, and were under a guarantee to that society, the society being, in fact, the prosecutors. To consider the effect of this argument his lordship looked at the objects of the Union, which comprised not only the prosecution of unregistered practitioners and the removal of persons guilty of unprofessional conduct, but the protection of practitioners. They were perfectly impartial ; their duty as members of the Union was as much for the protection of Mr. Leeson as a qualified practitioner as to have him removed if he ought to be removed. This point of law, therefore, his lordship decided in favour of the defendants. There was one other point his lordship dealt with. It was argued that the inquiry was not *bonâ fide* because the acts and conduct of Harness had been gone into, and it was said the inquiry was not really into Leeson's conduct so much as into Harness's. That was so in a sense ; but it was necessary and proper to inquire into Harness's acts for the purpose of seeing what it was that the accused was acting as a cover of ; and that being so, he could not say the inquiry was not *bonâ fide*. His lordship therefore refused the motion.

This decision of Mr. Justice North was appealed against by the plaintiff on Wednesday the 18th Dec., in the Court of Appeal, before Lords Justices Cotton, Bowen, and Fry.

Mr. Rigby, Q.C., Mr. Cozens-Hardy, Q.C., and Mr. George Henderson appeared for the appellant ; Mr. Everitt, Q.C., and Mr. Muir Mackenzie for the General Medical Council ; and Mr. Sebastian watched the case for the company, who were not parties to the action.

The arguments were concluded on the following day, when their lordships announced that it was their intention to reserve judgment.—*The Lancet*.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

### Odontological Society of Great Britain.

THE Annual General Meeting was held on January 13th, in the Society's rooms, 40, Leicester Square. Mr. HENRY SEWILL, M.R.C.S., L.D.S., President, in the chair. Present: a number of members and several visitors.

After confirmation of the minutes, Mr. Alfred Coleman, F.R.C.S., L.D.S., was elected an honorary member by acclamation.

The TREASURER (Mr. Thomas Arnold Rogers) presented his report. He stated the year had been a more prosperous one than the last, income having increased and expenditure decreased, but regretted that in the future so satisfactory a state of affairs could hardly be maintained, as in spite of the exertions of the officers of the Society inevitable expenses would have to be met.

The LIBRARIAN (Mr. Ashley Gibbings) stated in presenting his report that the Society's collection was in a satisfactory condition.

The CURATOR (Mr. Storer Bennett) had little to report. A smaller number of specimens than usual had been acquired for the Society's museum, but they had each been described at preceding meetings. Mr. Storer Bennett then described some cases of specimens which had been presented to the Society some months ago, by Dr. Talbot, of Chicago, exemplifying abnormalities of the jaws in children. Dr. Talbot, as was well known, classified these as (1) V-shaped; (2) saddle-shaped; (3) modified or half V-shaped; (4) modified or half saddle-shaped. The specimens before the Society exemplified this principle of classification. Dr. Talbot had also presented a *resumé* of his views to the Society. Mr. Storer Bennett further presented a specimen of a lower jaw given by the President. It had been found in Algiers in a tomb, among some Roman pottery, and was unquestionably authentic. A sixth-year-old molar had been lost at some period long anterior to death.

Dr. SCANES SPICER then read his paper on "Nasal Obstruction and Mouth Breathing as Factors in the Etiology of Caries of the Teeth and in the Development of the Vaulted Palate." At the outset of his special practice Dr. Scanes Spicer noticed an intimate association between the presence of carious teeth and diseases of the pharynx and tonsil. Mouth breathers, that is those possessing nasal obstruction, were, he found, the subjects of carious teeth, and in proportion to the extent and chronicity of the nasal obstruction. He further observed that patients from eleven years upwards suffering from nasal obstruction usually possessed highly vaulted palates, contraction of the dental arch and irregularities of the teeth. Among the last, the commonest were inclination outwards and forwards of the canines, and obliquity and overlapping of the superior incisors. Considering

the question, "in what does normal breathing consist," he contends that it should invariably be through the nose. The experiments of Aschenbrandt, Kayser and others show that almost the whole of the warming, moistening and filtering of the inspired air is done in the nose and its accessory cavities. It is stated that all the higher animals, the primitive Indian tribes of America, negroes, Malays and Bushmen, and practically all children at birth are nose breathers, whereas civilised man at an early age, often with the first catarrh, becomes a mouth breather. This is due to insufficient air supply when the nose only is used, and arises, we are assured, from the very prevalent nasal obstruction which exists amongst civilised people. These obstructions may be temporary, as turgescence or œdema, or permanent from inflammation of the mucous membrane with thickening; polypoid growths or true polypi; cartilaginous or bony outgrowths; septal deflections or naso-pharyngeal obstruction, *e.g.*, post-nasal adenoid vegetations. These nasal obstructions are, he thinks, more common amongst civilised than barbaric people, a conclusion arrived at (1) by examination of skulls in museums; (2) examination of negroes and Red Indians; (3) consideration of the features characteristic of non-civilised non-European races; (4) reference to Mr. Catlin's observations on primitive Indian races of America; (5) observation of the lower animals which approximate, the writer thinks, in their habits to uncivilised races.

The causes of these nasal disabilities in civilised man, Dr. Scanes Spicer traces in the artificial and imperfect heating of our houses and the vicissitudes of temperature to which we are subjected. The vitality of the nasal mucous membrane becomes lowered, its secretions vitiated, and as the causes persist, chronic disease, hypertrophy and vegetations are called into being. The chronic obstruction leads in the case of children to imperfect growth. The conditions of life amongst savage people lead to none of these troubles. Turning to the coincidence of caries and vaulted palate amongst civilised peoples, we are told that Indian and Arab races possess sound teeth; next come Mongolians, while Caucasians suffer from bad teeth. Professor Broca finds caries less frequent amongst the ancient people of Europe, whilst Mummery traces a close relation between habits of luxury and the presence of caries. According to Sir John Tomes, the increase in civilisation predisposes to the occurrence of caries, whilst amongst the lower animals caries is rare, except in domesticated beasts. Also the presence of contracted jaw, vaulted palate and irregular teeth is, according to Mummery, very rare amongst savage races. It is common experience, we are assured, that nasal obstruction and mouth breathing precede in the individual the onset of dental and maxillary abnormalities. Mr. Catlin is again quoted in support of the view that when the mouth is kept closed, and the normal flow of saliva takes place, the teeth are protected; under

opposite conditions, they become the prey of caries. According to Tomes both enamel and dentine may be decalcified by acids obtainable from food. Unhealthy mucus probably also determines caries, while acute stomatitis exerts a deleterious influence upon the teeth. Mr. Henry Sewill is cited to show that the well-accepted predisposing causes of caries are: (1) Innate structural defects in the teeth; (2) diseased oral secretions; (3) crowding and irregularity of the teeth, the direct agents being food acids, fermentation products, vitiated mucus. In health, that is, when we breathe through our nose and keep our mouth shut, (1) the teeth are kept at a uniform temperature, *i.e.*, of the body, and are protected from sudden changes. (2) They are perpetually bathed in warm alkaline salivary fluid, which washes away mucus, food *débris* and micro-organisms. (3) They are scoured by the friction of the tongue, lips and cheeks. In mouth-breathers, however, during sleep the person will lie upon his back, with his lower jaw depressed and mouth wide open. As a result, the teeth and gums are exposed to air at about 50° Fahr., as against 98.4 Fahr. during the day. This alternation of temperature is hypothecated as bringing about congestion, even inflammation of the mouth and pharynx, and increased secretion of strong acid mucus. The evaporation from the open mouth would, it is assumed, inspissate the mucous, make it stagnant and a nidus for micro-organisms. Again, the dryness of the mouth in mouth breathers prevents flushing of the teeth, and so *débris* collects about the teeth, ferments and commences caries. We are also told that the scouring of the teeth by the lips, tongue, &c., is not duly performed by mouth breathers. Again, inspired air, being laden with micro-organisms, in passing through the mouth, deposits these. It cannot be doubted, we are told, that chronic mouth breathing in childhood imposes abnormal conditions upon the tooth sacs, leading to an inferior quality of enamel and dentine. The vaulted palate, contracted arch, and dental irregularity are said to follow from mouth breathing and to be predisposing causes of caries. The relative frequency of caries in the different groups of teeth was then reviewed. The lower incisors and canines are seldom carious, being, it is assumed by the reader of the paper, covered in mouth breathers by the muscular curtain of the lower lip. The corresponding teeth in the upper jaw are more often carious. These teeth are said to be "kept high and dry" in mouth breathers, and hence covered with thick mucus. The parotid secretions are said to protect the upper molars even in mouth breathers hence the lower molars decay first. The onset of caries is stated to agree with that of nasal obstruction. Considering vaulted palate, contracted arch and irregularity of the teeth, Dr. Scanes Spicer quotes David, John Tomes and Greville Macdonald, to show that in their experience, as in his own, nasal obstruction is commonly associated with these buccal abnormalities. In this connection the writer

hypothesizes that disuse of the nose during evolution of the individual leads to imperfect growth and expansion of the nasal framework, owing to the abeyance of physiological stimulus to functional activity. In support of this contention, he points to the well-known and characteristic physiognomy of mouth breathers, and to Mummery's observations that savages and uncivilised persons enjoy an immunity from abnormalities of the maxillæ and teeth.

Dr. Scanes Spicer further states that removal of post nasal adenoid vegetations, besides curing nasal obstruction, provokes due evolution of the hard palate and teeth, and so corrects dental irregularities. In conclusion, Dr. Scanes Spicer rehearsed the symptoms by which mouth breathing may be detected.

The PRESIDENT remarked that the causes of dental caries were thoroughly understood, and an overwhelming amount of evidence showed that they were connected rather with external circumstances than with inherent or vital processes in the dental tissues themselves. The reader of the paper had advanced a considerable weight of evidence to support his views and hypotheses, and he (the President) hoped a good discussion would follow upon the points raised in the paper.

Mr. R. H. WOODHOUSE could not quite believe that mouth breathing played so important a part in producing dental caries. The very full circulation of blood in the mouth and teeth themselves would, he thought, prevent such extreme vicissitudes of temperature. Again, he thought that the general development of the individual had more to do with the shape of the jaws than nasal obstruction, or mouth breathing. It seemed to him that the reader of the paper had not laid sufficient stress upon the generally more hardy nature of the teeth among uncivilised races, both as regards their shapes, which were more rounded, and also their structure. A consideration of these points would probably account for the absence of caries quite irrespective of nasal obstruction.

Mr. HENRI WEISS believed that the foul mouths commonly existent in mouth breathers had much to do with their carious teeth.

Mr. STORER BENNETT reminded the reader of the paper that among the lower animals, wolves and dogs were mouth breathers, and except in domestication these creatures were not afflicted with dental caries—an apparent contradiction which Mr. HUXLEY (Birmingham) thought might be explained by the fact that in wolves and dogs the flow of saliva was unusually profuse and probably protected the teeth.

Dr. WILLIAM HILL could not but think that too great stress had been laid upon the question of temperature. He had, after considerable research, come to the conclusion that vitiation of the buccal secretions really played the most important part in producing caries. He thought mouth breathing possibly acted by vitiating these secre-

tions. He also regarded variations in the shape of the jaws as the result of racial or family mal-development, citing the prevalence of V-shaped jaws among idiots.

Mr. GEORGE CUNNINGHAM thought the paper and the discussion emphasised the fact that we knew very little about the causes of caries. He suggested many points which had been raised should be investigated by the collective investigation of the British Dental Association.

After a brief reply by Dr. SCANES SPICER and the usual votes of thanks to the retiring officers,

Mr. HENRY SEWILL delivered his valedictory address. Considering the net profits and losses of the year, he said the reports to which they had listened showed the Society was prosperous alike in its finances and its most valuable collections. Speaking of the losses the Society had incurred, he spoke in eulogistic terms of Mr. Spence Bate, F.R.S., and other members who had died during the year. He urged upon members the importance of recruiting fresh members for the Society and a fuller attendance at the meetings. The year had been marked by papers of the greatest value, and he insisted upon the advantage of obtaining papers from men well known in the scientific world, who were capable of dealing with matter while germane to dentistry, yet not actually included in that science. The importance of maintaining this high standard was strongly urged by Mr. Sewill, who congratulated the Society that men like Hutchinson, Ferrier and others, ranking among the leading thinkers of the day, were ready and glad to meet its members at their meetings. As to criticism, the President felt that the younger men were less prone to criticise than should be the case. Those who knew their groundwork well were often able to throw light upon matters under discussion, &c. Mr. Sewill reminded the younger members that upon them, and them mainly must the future prosperity of the Society depend.

The meeting then concluded with the announcement that at the ensuing meeting, to be held on February 3rd, Mr. W. Mitchell would read a paper on "Clinics and their Effects on Dental Societies." Mr. George Cunningham would also read a paper on "An International System of Dental Notation," and Mr. Hern give a casual communication "On a Case of Buried Molar in the Lower Jaw."

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In the course of the meeting the following members were elected as officers and councillors for the year 1890 :—

PRESIDENT.—Felix Weiss.

VICE-PRESIDENTS.—(*Resident*) F. Canton, J. Stocken, David Hepburn ; (*Non-Resident*) J. Cornelius Wheeler (Southsea), W. Bowman Macleod (Edinburgh), J. H. Redman (Brighton).

TREASURER.—Thomas Arnold Rogers.

LIBRARIAN.—Ashley Gibbings.

CURATOR.—Storer Bennett.

EDITOR OF THE TRANSACTIONS.—Walter Coffin.

HONORARY SECRETARIES.—E. G. Betts (*Council*), J. Ackery (*Society*), W. A. Maggs (*for Foreign Correspondence*).

COUNCILLORS.—(*Resident*) R. H. Woodhouse, L. Matheson, W. Scott Thomson, C. S. Tomes, F.R.S., Willoughby Weiss, W. H. Woodruff, W. Hern, F. Newland-Pedley, C. J. Boyd Wallis; (*Non-Resident*) T. C. Parson (Clifton), R. T. Stack (Dublin), F. J. Vanderpant (Kingston-on-Thames), M. de C. Dickinson (St. Leonards-on-Sea), A. A. de Lessert (Aberdeen), Alex. Fothergill (Darlington), W. B. Bacon (Tunbridge Wells), H. B. Mason (Exeter), Mordaunt A. de C. B. Stevens (Paris).

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### Odonto-Chirurgical Society of Scotland.

THE Second Ordinary Meeting of the Session 1889-90 was held in the rooms of the Society, 5, Lauriston Lane, on Thursday, the 12th December, the President, Mr. J. AUSTEN BIGGS, L.D.S., in the chair.

At the conclusion of the formal business, the following gentlemen were balloted for and admitted Members of the Society:—Herbert Bycroft Ezard, L.D.S.Edin., 32, Buccleuch Place, Edinburgh; Frederick Page, L.D.S.Edin., 6, Hope Street, Edinburgh; John Turner, L.D.S.Edin., 60, Lauriston Place, Edinburgh; John Girdwood, L.D.S.Edin., Patriothall House, Hamilton Place, Edinburgh; Gordon Reid Shiach, L.D.S.Edin., 1, North Guildry Street, Elgin; David Monroe, L.D.S.Edin., 3, Howe Street, Edinburgh; James Leslie Fraser, L.D.S.Edin., 5, Castle Street, Inverness; John Stewart, L.D.S.Edin., 65, Queen Street, Edinburgh; John Crostwhaite Macnamara, L.D.S.Edin., 1, Rankeillor Street, Edinburgh.

Mr. MACLEOD gave notice that at the next annual meeting he would move that Law II., defining the qualification of membership, be altered.

The Law as it at present stands reads thus:

“The Society shall consist of ordinary, honorary, and corresponding members.

“The ordinary members shall consist of gentlemen practising as dentists in Great Britain, and of medical or surgical practitioners interested in dental surgery.

“The honorary and corresponding members shall consist of gentlemen practising dentistry in Great Britain, in the colonies, or in foreign countries, and of retired dental practitioners in Britain, as well as such medical or generally scientific men as may have distinguished themselves in connection with dental surgery.

“The ordinary members shall have vested in them the government of the Society, and all cases not otherwise specified shall be decided by them, by a majority of votes, by ballot, if required.”



Mr. Macleod will move that it shall in future read :—

**"II. ORDINARY, HONORARY, AND CORRESPONDING MEMBERS.**

**"The Society shall consist of ordinary, honorary, and corresponding members.**

**"a. Ordinary Members.**—Gentlemen shall be eligible for ordinary membership who hold the Licentiate in Dental Surgery of any of the Licensing Bodies of Great Britain or Ireland, or a colonial or foreign qualification recognised by the General Medical Council entitling them to practise dentistry in Great Britain.

**"b. Honorary Members.**—Gentlemen [practising or retired] who hold a qualification recognised by the General Medical Council, or foreign or colonial dentists holding a qualification recognised in their own country, who may have distinguished themselves in the practice of, or in connection with dentistry, and medical or scientific men who may have distinguished themselves in connection with dentistry shall be eligible as honorary members.

**"c. Corresponding Members.**—Gentlemen resident in the colonies or foreign countries holding qualifications recognised in their respective countries shall be eligible as corresponding members.

**"The ordinary members shall have vested in them the government of the Society, and all cases not otherwise specified shall be decided by them, by a majority of votes, by ballot, if required."**

The following paper by Mr. BOOTH PEARSALL was, in the absence of the author, read by Mr. W. Bowman Macleod, and was illustrated by diagrams, metal casts and dies, and appliances :—

The sand-moulding flask I have the honour of showing to you to-night has been designed to meet some of the many defects we find in zinc discs as they are commonly made by dentists. This design has been the subject of a good deal of thought for many years, if one can be said to think out a design never put into practice, and I think anything that will aid us in our workroom labour by shortening labour—meaning tensile strength and decreasing waste—is worthy of attention. The sand-moulding flask before you was invented about eighteen months ago, as an experiment to see how far the Bayley flask and die could be improved upon, and has been in constant use in my workroom ever since it was made. During this time of constant use, the only improvement has been to have two patterns of moulding-plates, one with the cone-shaped aperture somewhat larger than the pattern before you, so as to suit very large jaws. The flask is made of two parts—a moulding-plate and an iron sand-ring made to fit the plate.

The moulding plate is circular, the upper surface has four concentric grooves on its surface and four projectors or tabs : the grooves are for holding the sand in such a way that the grooves make so many dykes or obstructions to prevent the hot metal running out between the moulding-plate and the surface of the sand surrounding

the mould. The concentric grooves have another object, namely, to guide the workman in correctly centering or ex-centering the position of the model, so that the cone or striking part of the die will come where it may be wished to have most strength in the die—in other words, where the heaviest hammering is to be done. On the underside of the moulding-plate are to be found four webs or feet running from the circumference of the plate to the aperture in the middle, which moulds the truncated cone for hammering upon, the object being to make the moulding-plate strong enough to stand rough usage, of sufficient weight to prevent the moulding-plate from floating off the sand mould by the weight of the melted metal as it is poured into the mould, as well as to form steady feet for the plate to rest on in the sand-moulding trough. The iron sand-ring is made of strong hoop iron in the usual way, and it should fit easily and truly on the grooved surface of the moulding-plate next to the projectors or tabs.

When sand-moulding is to be done, the moulding-plate is placed in the sand-trough grooved side *upwards*, and on it the shallow plaster model (from  $\frac{3}{4}$  to one inch deep, as may be desired). The model is either correctly centered by the aid of the grooves, or it may be put out of the centre so as to bring the cone-shaped aperture wherever it may be desired. The position of the plaster model having been determined, the iron sand-ring is put on the moulding-plate surrounding the plaster model. The sand is then packed in in the usual way, and when the packing is finished, the iron ring full of sand and the moulding-plate are turned upside down, the moulding-plate removed, exposing the plaster model, which is then removed by the aid of a point and a hammer in the usual way.

The mould having been examined and any loose particles of sand blown out of it, the melted zinc can be poured into the sand-mould and the moulding-plate put over the mould, and the remaining zinc poured in to make the coned end of the die. If the sand-mould is not quite filled with zinc, there will not be any difficulty in placing the moulding-plate on the sand-mould, but if the metal is poured in a slovenly way, there is no doubt that a difficulty will occur, the overflow of metal preventing the moulding-plate from going into its place. With skilful workmen and ordinary care, the pouring of this die is just as easy as any other form.

In use, the swaging of a plate will be found more certain and accurate because of the ease with which heavy blows can be struck on the truncated cone, and if the section of a die be examined, the hollow formed by the cooling of the zinc in the centre is really a source of strength, so far as the construction is concerned.

The cone-shaped end, with the model projecting over it, enables the die to be held in a vice, in such a way that blows struck on the palate or teeth of the model will not cause it to slip in the jaws of the vice, but has a steady bearing, forming a great contrast to the

slippery and uncertain hold of the ordinary form of die when placed in a vice to be filed or hammered, and it can be easily turned round when the jaws of the vice are opened, and instantly tightened again in the desired position, whereas the Bayley or ordinary form of die cannot be secured with the same certainty, precision, or rapidity in a vice. You will also notice the ease with which blows can be struck outside of the cone on the shoulder formed by the projection of the mould under the cone, and such blows are often of the greatest service in certain cases, the instances of which will readily occur to practical minds.

The advantages may be summed up as follows :—

(1) Saving in the amount of metal to be melted, as zinc deteriorates by constant melting ; this is important, as the usual supply of zinc ought to go farther in the constant use of smaller dies.

(2) The ease with which a shallow plaster model can be removed from the sand as compared with a deep one.

(3) The great increase of strength, owing to the improved construction of the die, aided by the cooling of the zinc.

(4) The ease and rapidity with which the new form of die can be held in the ordinary vice.

(5) The certainty of blow secured by the use of cone-shaped end of the die.

(6) The choice offered to the workman in placing the strength or blow-resisting cone where it is needed to resist heavy hammering.

(7) The ease with which the hammer surface of the die can be struck with a heavy hammer.

(8) Simplicity of method, the details being nearly the same as those used in the dental workroom.

In diagram No. 5 you have sections of the same model used as a die in my method, the usual method, and that invented by Bayley. I have to inform you that manufacturers, so far, cannot see any advantage in my method, and one firm have generously offered to *connect my name with the invention* if I will place my invention in their hands, without any remuneration for the cost of experiment and wear and tear of brain substance, and they have also informed me that I shall have great difficulty in converting dentists to the use of my form of die. That there is great scope still to be found in the improvement and increased efficiency of work-room tools, I have no doubt, and I hope from this time forward to do something to make our work-room places where work shall be an enjoyment, not a sorrow. Whatever may be said about American inventions, and the appreciation shown whenever any good and practical invention is placed in the hands of our profession, I do not think the British dental manufacturer can lay any claim to any credit in promoting or fostering inventions of any kind amongst us until the demand for the newer and more efficient appliances of the men of progress has become so

marked on the part of dentists, that they cannot avoid "going with the times." I do not think the difficulties and inconveniences found in connection with the forms of metal dies have been sufficiently studied by practical dentists; and I trust you will find, by practical experiment, that I have done something towards making dies something less of a worry and something more of a pleasure than they have been found in the past.\*

The President called on Mr. ANDREW WILSON for his paper on "The First Premolar in the Typical Dentition of the Placental Mammals."

The number of species in which there are, in the adult, four teeth separating the canine from the molars, is considerable, but in very few of these cases are anatomists or naturalists agreed in regarding the one next to the canine as a premolar.

These are those in which the typical four milk molars are succeeded vertically by four permanent teeth, and, so far as observed, they are very few indeed. As examples in recent species we have the tapirs, and, according to Mr. Spence Bate, the mole. In the vast majority this tooth has neither had a predecessor nor will have a successor; and, while regarded by some as the first premolar, it is by others held to belong to the milk series, thus giving rise to considerable confusion, which is not lessened by its being occasionally counted in both.

As showing this confusion, I will quote a few extracts from great authorities. Professor Huxley,† writing of the horse, says, "The tooth here counted as a first premolar may be a milk tooth, as it appears to have neither a predecessor nor successor, and soon disappears."

Of the rhinoceri‡ "of the four milk molars, the first, as in the horse, is smaller than the others, and is not replaced." I may notice, in passing, that in some extinct rhinoceri there was both a MM.<sup>1</sup> and a PM.<sup>1</sup> in the upper jaw at least.

Speaking of the tapirs,§ he says, "In the anterior premolar (or milk molar?)." In this genus it is now known that there is in the upper jaw both a MM.<sup>1</sup> and a PM.<sup>1</sup> as is well shown in the beautiful preparations lately added to the Science and Art Museum in this City. These consist of the crania of types of the several mammalian orders, having the milk series of teeth *in situ*, while the outer wall of the alveolar process having been removed, the permanent teeth are seen lying in their crypts. I would strongly recommend members to inspect this most interesting and instructive collection.

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\* Mr. Macleod has, since the meeting, tested this method of making dies, and finds it much more simple and useful than the reading of the paper would lead one to expect.

† Anat. Vert. Animals, p. 295.

‡ Anat. Vert. Animals, p. 309.      § *Idem.*, p. 311.

Of the pig,\* on one page he gives the adult formula as having  $PM\frac{1}{2}$ , then a couple of pages further on, and after giving the milk dentition as having  $MM\frac{1}{2}$ , he says, "The first permanent molar is the first tooth of the permanent set which comes into place (at about six months after birth), and the permanent dentition is completed in the third year, at which time the first deciduous molar which is not replaced, falls out," and he then gives the permanent formula as having  $PM\frac{3}{4}$ .

Of the hippopotamus,† after giving the milk molars as  $\frac{1}{2}$ , he says, "The first deciduous molar persists a long time, and seems not to be replaced."

Treating of the camel,‡ he says, "There are not more than five grinding teeth, in a continuous series, above and below," but he ignores the presence of the caniniform  $PM^1$  in the upper jaw, which is separated from  $PM^2$  by a diastema,  $PM^2$  being suppressed.

One more quotation from him. Of the dog,§ he says of the anterior three premolars: "These teeth are two-fanged," when in reality the first is single-rooted, and almost rudimentary in form. Again, "The first premolar of the adult dentition, having no deciduous predecessor, so that in this, as in so many other cases, it is doubtful whether it should be counted in the milk, or in the adult dentition." "The so-called 'first premolar' of the adult, and anterior molars appear before any of the deciduous molars are shed."

Professor Owen, in his "Odontography" (pages 477, 484), says of the dog:—"The first permanent premolar comes into place before any of the deciduous teeth are shed, its germinal predecessor disappearing before birth," and, of the hyæna, "The figure of the skull of the young *Hyæna Crocuta* . . . shows that stage when the correspondence with the formula of the genus *Felis* is completed by the appearance, in the upper jaw, of a small premolar in the interspace between the canine and the first molar of the deciduous series; but this appearance is due to the apex of the first permanent premolar, which cuts the gum before any of the normal deciduous teeth are shed: whether it is preceded, as in the dog, by a deciduous germ tooth in the fœtus I know not."

Mr. C. S. Tomes, in his Manual, is very unsatisfactory in his treatment of this tooth, in some cases speaking of it as a temporary tooth, in others as a permanent one, and even the figures and text contradict each other.

Lastly, in a footnote to the first page of the Introduction to vol. iv. of the Cat. Fos. Mam., Brit. Mus., 1886, we find it stated, "The author is inclined to believe that the first cheek-tooth in the *Perissodactyla*—which in *Tapirus* is always replaced by a vertical successor

\* Anat. Vert. Animals, pp. 383, 317.

† *Idem.*, pp. 328. ‡ *Idem.*, p. 319. § *Idem.*, pp. 356-357.

in *Rhinoceros* is occasionally so replaced, but in *Equus* never had any successor, and is frequently absent—belongs to the milk molar rather than to the premolar series." No notice being taken of the homologous tooth in either the Artiodactyla or the Carnivora, although any decision regarding the one must be equally applicable to the others.

Turning now to the reasons given in support of its being regarded as a milk molar, these are two—first, its not having had a predecessor, and, second, its being soon shed.

Having in the Mammalia many instances of the absorption of milk teeth in various stages of development "in utero," and seeing the contradictory statements made regarding the presence of such a tooth in the foetal dog, as evidenced in the quotations given from Owen and Huxley, much importance cannot be attached to the first reason. But, even supposing that there is no predecessor, we may put this reason aside, as we find that the same authorities who hesitate to recognise this tooth as one of the permanent series, recognise as an established fact that in the marsupials all the pre-molars, excepting the last, have had no predecessors, and that in some species, even of the last one, it is doubtful or not proven, so far as present knowledge goes.

Turning now to the second reason, its being in many cases soon lost, we find that while in some it is so, in many more it is long retained—the more surprising, seeing that it seldom is a functional tooth. A more important point would be the period of its eruption, compared with that of the undoubted milk molars, as also with that of the first permanent molar. Supposing it to be a milk molar, we have the anomaly of its eruption being preceded by that of the second, third, and fourth milk molars, and coincident with, if not slightly after, that of the first permanent molar. Now this, which would be remarkable if a milk tooth, would not be so if a permanent one; its early eruption, compared to that of the other premolars, could be explained by the fact of its having had no predecessor.

In man we frequently, I may say usually, find that when a milk tooth has had to be removed very early in life, its successor appears much sooner than would have been the case had it been normally shed. Still more to the point, in the only case in man in which I have met with a front permanent tooth, which had no temporary predecessor, it erupted long before any of the other permanent teeth, but after all the temporary ones. It did duty with the temporary series, and now, years after they have disappeared, it is doing so with its permanent colleagues. As to the periods, when what I claim to be the first premolar is shed, there is, unfortunately, very little data on record. In the carnivora we have it in place along with the full adult dentition, and in the bears it is in place long after the second and third premolars have been lost.

In showing the inconsistency of those objecting, on the first ground, I referred to their treatment of the marsupials' premolars; and, as

doing the same for the second, I point to a special tooth in the same group—namely, the penultimate premolar, as seen in the larger species of *Macropus* (kangaroos). This tooth is erupted very early in life—a young skull in my collection, in which the third upper incisor is just erupting, shows two cheek-teeth in place, the first, the tooth in question, with, to its distal side, the temporary molar. The first is shed, and its socket obliterated, in advance of the shedding of the temporary tooth.

In these species, its being so shed is thus not due to the eruption of a large last premolar (the reason given by Mr. C. S. Tomes in his *Manual*), but to the same cause, which, as the animal ages, leads to the shedding of all the permanent cheek-teeth, except the third and fourth molars. Still there is now no hesitation in recognising this tooth as a premolar, although Owen regarded it as one of the temporary series.

In conclusion, I will just bring under your notice a remarkable peculiarity, occasionally met with in the first premolars, but seemingly rarely—namely, its being duplicated, that is, we have, besides the second, third, and fourth premolars, *two* first. This occurrence, I suspect, is not so rare as records would lead us to believe, as there are two in my own collection—one in the upper jaw of a dingo, the other in the lower jaw of a bear. In both it is on the left side only, and in both the one next to the canine is the larger, and I venture to throw out the suggestion, may this smaller tooth not be the first milk molar, which is normally suppressed.

The SECRETARY said: Mr. H. H. Edwards, whose name we are rapidly learning to associate with the question of the missing incisors in man, has again sent to us drawings of models he has taken, illustrative of the subject. It will be remembered that, four years ago, he sent us a valuable communication on this topic, with nine pen and ink sketches, which were reproduced in the Society's Transactions. Mr. Edwards, in some recent correspondence, says:—

“That, as far as his field for investigation is concerned, he much regrets that he is principally engaged in a family practice, and is unassociated with any hospitals, and that therefore his opportunities of observation are necessarily limited, but those that occur he does not pass by—examines every tooth he removes, to see if there is anything abnormal to be detected, and, where possible, taking impressions of a mouth which shows any peculiarities. In his practice he saw mainly the same people year after year, the children presenting the same characteristics as their parents or grandparents; and it was that gave him the idea he expressed, four years ago, of the theory of inheritance as evidenced in those organs over which we have the special care. It would take years to produce a basis on which to found even a theory: therefore, in the meantime, it behoves us all to contribute authenticated drawings or models of those cases that come directly under our

notice. One swallow does not constitute a summer ; but if we could produce thousands of swallows, we should, at all events, be entitled to a consideration. Therefore he would again urge upon his fellow-members to exert themselves, and, in the words of the title-page of a well-known journal, 'Observe, compare, reflect, record.' It is to our seniors to whom we would especially look for enlightenment, who, having made a competency—with time at their disposal, and with minds ripened by long experience—are better fitted to pass an opinion on the pabulum with which we younger men should make every effort to supply them."

Mr. Edwards is becoming rather of the opinion that the supernumerary tooth is a freak of nature ; but respecting the lateral incisors, he sees but little, no doubt, in the theory that they are becoming suppressed, and that if nothing were put on record on the subject, future generations might fall into the error that we possessed no lateral incisors at all, or that in the case of a supernumerary tooth presenting itself, its original position might be argued to all eternity.



Fig. 10. Male, adult.—Common phase of suppression of upper lateral incisors, centrals slightly spaced.

Fig. 11. Female, adult.—Upper jaw. A redundant right lateral situated within the arch, behind, and similar in shape and size to the normal tooth.

Fig. 12. Male, adult.—Model of upper jaw. Centrals much spaced ; right canine next to central ; temporary canine still standing, and supernumerary tooth between it and left central.

Fig. 13. Male, adult.—Upper jaw. Canines next to centrals, and



slightly overlapping them, and on the left side a supernumerary or dwarfed lateral, and also the root of the left temporary canine still remaining.

Fig. 14. Male, adult (*Figured below*).—This is perhaps the most interesting of the number. It is the model of an upper jaw, with two supernumerary molars in place, behind the third molars, or rather behind the roots of them, as the crowns have been lost by decay. The left lateral is suppressed.

Figs. 15, 15a represent models of the upper and lower jaws of the same mouth. In the lower the laterals are suppressed; in the upper two bicuspid have been also suppressed. On the right side the existing bicuspid has the buccal aspect turned to the rear. It would be difficult to say whether they were the first or the second. The right is smaller than the left, and they appear to be the first on the left and the second on the right.

The suggestion that naturally presents itself is, were the teeth not removed, either in mistake for temporary teeth (in the lower jaw) or, in either case, for purposes of regulating on the score of crowding? Mr. Edwards thinks this is not the case, the patient assuring him that no teeth had been removed from either of these positions indicated, and if the latter hypothesis were correct, their removal was very ill advised, as the teeth are leaning in too much, and additional teeth would rather have been required to have kept their inclination at the normal angle, and the gentleman in question had been under the hands of his predecessor and ante-predecessor (carrying him back some thirty years), and he is not inclined to believe they would have accorded him such mistaken treatment.

Mr. WALKER (Dundee) exhibited a cap which he had constructed to fit over the exhalation valve of the "gas" face-piece, constructed somewhat on the principle of the ventilation shafts with reversible heads, which usually form a very prominent feature on the deck of a steamer, the object aimed at being to direct the respiratory exhalations away from the face of the operator.

Mr. Walker said: Allowing that the face-pieces supplied to us by the dépôts are wonderfully perfect, as far as the safety of our patients is concerned, he would venture to think they were not so as regards the operator, on account of the present open shield on the expiration valve.

The exhaled air and gas is often expelled with unusual force in the face of the operator, and there is no way of avoiding this extreme danger except by getting into rhythmical breathing with the patient. He would say extreme danger advisedly, because of the possible risks encountered with patients in the first stages of phthisis; but leaving these out of the question, he would condemn the open shield on the minor principle of the escape of fœtid breath and oral gases, especially where there had been much previous inflammation.

The operator, very watchful of facial symptoms and respiratory surroundings, is too often forgetful of this, and, in bending over the patient, is often quite close to the exhalation valve, thus presenting, to our minds, a picture far from pleasant, even in contemplation.

With the aim of avoiding such danger, he exhibited a safety or amelioration cap, composed of a "bysel" or ferrule, to fit the existing valve-chamber, with  $\frac{1}{8}$  inch outside flange, to form an enlarged cylinder chamber  $\frac{1}{4}$  inch in height. The dish rises only to touch upon two stop pegs, fixed on to the bottom of the cylinder cover, which equalises the air passage leading to a right-angle funnel, made to revolve so that germs of disease may pass into the room, and not be expelled directly into the face of the operator. The face-piece had also a small chain and catch attached, by which it was secured to a light bracket arm, similar to that used with the water-motor engine, and could thus be rapidly swung out of the way when sufficient gas had been administered to the patient.

Mr. J. GRAHAM MUNRO exhibited a very ingenious binder for lathe bands. It consisted of a spiral steel spring of about two inches in length, with a bore sufficiently large to admit the ends of the "gut." The free ends of the wire were bent up, so that after the band was admitted, the wire, on being pressed down, passed diametrically across the opening through the centre of the cord, firmly securing it in position.

Mr. Munro also exhibited a model of the lower jaw of a youth of sixteen. Two of the incisors were missing, and a temporary incisor still retained. The boy had never had any of his lower incisors extracted, and his grandmother had the same teeth missing, and had also retained the temporary tooth.

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### The Students' Society of the Dental Hospital of London.

ORDINARY General Meeting, held November 11th, 1889, WILLIAM HERN, Esq., President, in the chair.

Certain alterations in the rules of the Society deferring, among other things, the hour of meeting from seven to eight o'clock p.m., were carried.

After some interesting casual communications, the PRESIDENT called on Mr. BRIAULT for his paper on "Dental Education," in the course of which, having referred to general education, he discussed the mechanical training of dental students.

Under the present *regime* some of us may, during our apprenticeship, acquire all the knowledge and practice that is desirable. But a large number are less fortunate; for example, a student may be with

an old-fashioned practitioner, who has not kept up with the times, and is consequently unable to teach his pupil many of the later and improved methods of work, or he may be with a man whose practice is not high class, and consequently he is compelled to do poor work, the result being that, at the end of his time, he has no better idea of good work than when he commenced. On the other hand, the training of those of us who are fortunate enough to see good work done is often left in the hands of a mechanic, who cares little or nothing whether we acquire proficiency or no, and too often looks on the artful pupil as a nuisance; or perhaps he may take an interest in us and keep us throwing off his models and attending to inferior details with useless and wearisome monotony, during the whole of the three years we are under his care, never dreaming of allowing us to do more important work, for fear of an unsatisfactory result. This may seem an overdrawn case, but one of our late house surgeons told me that he was never allowed to do any of the best work during his apprenticeship, and too often spent his time running errands or engaged in other menial employments. Even supposing the pupil to have had an intelligent and painstaking teacher and plenty of practice, how often has he had an opportunity of taking models and bites and fitting work in the mouth? As a rule, a model has been brought to him, with instructions how the case is to be made, without his being told why, and even if he is told, he is often unable to appreciate the reasons, since he has not seen the patient's mouth; and by some practitioners cases are not uncommonly made to suit the patient's means rather than the patient's mouth. Is it not unfortunately true that men are launched on the public as qualified dentists on the strength of certain dissections performed and lectures attended without ever having fitted a denture in the mouth.

Now this is a somewhat sad state of matters, and one which I think lies with the dental schools to alter.

Students must be taught this part of their work somewhere. It is not to be expected that practitioners will care for their patients to be made the subjects of the pupil's first attempts and this being the case we must look to the hospitals for the patients and the practice.

The chief reasons urged against mechanical work being done at the hospital appear to be: Firstly, the difficulty in determining who are fit patients to be supplied by the dental schools with artificial dentures, and secondly, who should defray the expense; whilst again there seems to be a fear, that if the hospitals undertook such work they would in many instances deprive young practitioners of cases on which they frequently rely to give them a start in life. Now I think, without interfering with the vested interests of these young dentists, we can find in the army, navy and the workhouses, patients to whom such work is an absolute necessity, which should be provided for them by the country and from the same funds which now supply them with medical and surgical attendance.

In the case of the army and navy, we are aware that the State exercises the greatest care for and is particularly anxious that, the health of our soldiers and sailors should be preserved at the highest possible level. Whilst fully recognising that the efficient soldier or sailor is a costly individual to the state, yet, in this age, when the value of good sound masticatory mechanism is so fully acknowledged as a means of retaining health, such an arrangement as is here suggested might be worth the careful consideration of our military and naval authorities, a point altogether outside the value of such a field of practice for our students. Before finishing the subject of the mechanical training of the pupil, I should like to call attention to a curious regulation which exists with regard to qualified surgeons who wish to practise dentistry. It appears that these gentlemen are only required to undergo two years' mechanical training, instead of three which are required of the ordinary student, whether he intends to become a surgeon or no. Why this is so does not appear, unless the knowledge of medicine, midwifery, and surgery may be supposed to assist a man in the difficulties he may meet with in his mechanical cases.

Some further remarks upon the rest of the student's career followed. The paper was discussed at some length and the meeting subsequently adjourned.

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### Students' Society of the National Dental Hospital.

THE last ordinary meeting of this Society was held on Friday, December 6th, at 8 p.m.

The minutes of the previous meeting were read by the Secretary, and confirmed.

Messrs. Buist and Shelling were present as visitors, and received the usual form of welcome from the President.

The following gentlemen brought forward casual communications for the Society's inspection :—Messrs. Carter, Humby, Denison Pedley, and Ridson.

The names of officers for the ensuing year were nominated for election.

The President then called upon Mr. R. Denison Pedley, F.R.C.S. Edin., for his paper, entitled "Some of the Causes of Decay in Children's Teeth, and their Treatment."

He stated that the principal predisposing causes of disease were unhealthy parents, unwholesome food, and miserable homes. This was as true of the teeth as of the body in general.

Inheritance had an important influence on the teeth in many ways, but its direct influence was frequently obvious in the defective structure of the temporary teeth, as their crowns were for the most part calcified before birth.

Defective structure of the teeth was due chiefly to such constitutional diseases as syphilis, rickets, and the eruptive fevers.

Dental surgeons were only called upon to treat the local manifestations of such predisposing and constitutional causes. With the exception of *improper feeding*, rickets was a diet disease. Every one having the care of children's teeth should take an interest in the important subject of diet. It was not so much diet tables we wanted as common sense, much of the improper feeding of children being due to ignorance. Uncleanliness is one of the principal causes of decay in the teeth of young children. Among the poor a tooth-brush is seldom known. Even among the intelligent and well-to-do, its use is not commenced early enough. Children's teeth should be cleansed as soon as they have any. Very little care is taken of the temporary teeth ; they should be retained as long as possible.

Careful cleansing and filling as a substitute for decay were the principal treatment. Where caries was superficial the application of nitrate of silver was useful. There should be no hesitation about extracting a temporary tooth when a child cannot eat on it with comfort and is in constant pain, or there is any sign of an alveolar abscess arising from it.

There is no evidence to support the idea that the jaw contracts. When temporary teeth are retained too long disastrous results often arise from suppuration spreading to their permanent successors. Absorption of the fangs is a vital process. The absorbing papilla will only attack living tissue. Dead roots will destroy the absorbing organ, and therefore its function ceases. Evidence of these facts are shown by (1) the ends of necrosed roots protruding through gums and even piercing the cheek ; (2) carious dentine in the crown is left standing alone, while the living tissue is eaten out all round it.

A discussion followed, in which Messrs. Allnutt, Carter, Grutham, Humby, Prager, the Dean, and the President took part ; after which the President thanked Mr. Pedley for his instructive paper, and the meeting was adjourned until the second Friday in January.

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### Dental Hospital, Birmingham.

THE annual meeting of the Dental Hospital, Birmingham, was held on Friday, December 13th, at the Council House, the MAYOR (Mr. Clayton) in the chair. There were also present Major-General Phelps, Dr. Simon, Dr. Vinrace, Messrs. J. H. Chance, J. A. Jones, E. F. Booth, A. Turner, A. Edwards, J. Humphreys, S. W. Haynes, W. Arthur Addinsell (hon. secretary), &c.

THE HON. SECRETARY (Mr. W. A. Addinsell) read the report of the Committee, which stated that the number of cases treated and the nature

of the work performed during the fourteen months ended September 30, 1889, were as follows :—Number of patients treated, 6,781—for extractions, 6,102 ; and for fillings, gold 167, other 1,483 ; miscellaneous and advice, 1,302 ; anæsthetics, cases 530. These numbers represented an amount of suffering relieved or permanently cured that was almost incredible. The structural alterations to the various operating-rooms, the necessity for which the committee referred to in their last report, had been carried out, and from the greater convenience and increased facilities for special operations which had resulted therefrom it was evident that the expenditure was judicious. The expenditure for the fourteen months had been £378 8s. 1d., while the income (including special and very exceptional donations, £159 15s. 11d.) had been £503 18s. 3d. Still, there were outstanding liabilities which would almost wholly absorb the small balance in hand. The donations for the year were thankfully acknowledged, and included the sum of £59 11s. 11d. from the Hospital Sunday Fund, £39 17s. from the Hospital Saturday Committee, £32 14s. 6d. from the dramatic performance by Members of the Mason College Union, and £25 from the Charity Sports Committee. But the Committee did not anticipate receiving anything like that amount during the next twelve months, so that they would have to depend chiefly upon the registration fees and subscriptions. The subscription list at present stood at £90 4s. only—an amount totally inadequate for the bare necessities of the hospital, and altogether out of proportion to the useful work it was doing in the city. The Committee recorded their appreciation of the services of the hospital staff, and, in conclusion, made an earnest appeal to their fellow-citizens for more funds to enable them to carry on and extend their work. The Surgical Committee reported that the statistics of the past twelve months showed, as was anticipated, a considerable diminution in the number of patients attending the hospital, especially in the number of teeth extracted ; and also, at the same time, there was a highly satisfactory increase in the amount of conservative work done for the patients. The first result was due, doubtless, principally to the influence of the registration fee upon that large section of the poor who only thought of their teeth when they ached, and then only with the desire to lose the pain and the tooth together. But the second result was very gratifying, showing as it did that the section of the poor who valued their teeth, and desired to preserve them, attended the hospital in larger numbers each succeeding year.

The MAYOR, in moving the adoption of the report and statement of accounts, congratulated the hospital on being in a very satisfactory condition. In common with all hospitals, it wanted more funds. However, he noticed that, whereas there was a balance to the bad of £22 at the beginning of the year, at the end of the twelve months there was £120 to the good. Certainly against that there were out-

standing liabilities to the extent of £80. He hoped the material improvement of the past year would be continued. At the present time hospital administration was receiving considerable attention. He did not know how far the Dental Hospital was affected, but he supposed if there was a reform wanted in hospital administration the Dental Hospital was one of the sinners. He did not wish to prejudge the question, but it was of very great importance to all classes of society that hospitals should be administered so that those whom they were originally intended to benefit should receive the benefits intended.

Mr. J. H. CHANCE seconded the motion, remarking that he thought the conference on hospital administration could only result in benefit to those institutions.

Votes of thanks were passed to the staff and committee.

In proposing the re-election of officers, Major-General PHELPS commented upon the great services rendered by Mr. W. A. Addinsell as hon. secretary.

A vote of thanks to the Mayor closed the meeting.

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### Victoria Dental Hospital.

THE annual students' dinner was held at the Grand Hotel, Manchester on Saturday evening, December 14. Mr. HENRY PLANCK presided. After "The Queen" had been drunk with musical honours, Mr. W. HEADRIDGE proposed "The Owens College," and said that that institution was doing noble work. Men who had been associated with the College had made their mark in various walks of life, and he believed that the teaching staff was gradually becoming second to none in Europe. They had lost Sir H. Roscoe; and he regretted to say were about to lose Professor Greenwood, who had spent the best years of his life in connection with the college.

Professor YOUNG, in reply to the toast, said he had been thrown into contact with Professor Greenwood in his work at the college, and could testify to his high appreciation of the medical department of the institution. With regard to the dental department, their expectations during the past year had been considerably exceeded. The number of students had been absolutely doubled. Dental surgical instruction had made enormous strides, and had now got a firm footing in the college. It depended upon the students whether that position was to be maintained and perpetuated, and whether it was to be the success it promised to be. He should like to see more enthusiasm among the dental students. Enthusiasm on their part would have its reflex on the part of their teachers. The fundamental training of a student for dental surgery should be the same as that of the medical student.

Mr. PARSONS SHAW proposed "The Medical Profession," and said

he quite agreed that the elementary training of the student in dentistry should be on the same lines as that of the ordinary medical student. There was no better system of education than that connected with the Owens College and the Victoria Dental Hospital. The medical was a sister profession to that of dentistry.

Dr. STALLARD, whose name was coupled with the toast, said he had been three years connected with the training of dental students, and had received from them nothing but courtesy and kindness. He would press upon them the desirability of taking up the question of anæsthetics. The young students were now sent first into the anæsthetic room, but he thought that was the place for the senior students. He saw the importance of it in practice. They had to consider the heart and lungs as well as the jaw. Medical men and dentists were being drawn closer together every year. Diseases of the mouth required special anatomical knowledge, and he hoped the time would come when dental surgery would be one of the specialities of the medical profession.

Mr. GEORGE REAM gave "The Staff of the Victoria Dental Hospital," and said the heads of the staff consisted of men of eminence and intellect whose worth could not be excelled by any hospital in England.

Mr. T. TANNER replied. The staff, he said, endeavoured to make the teaching as clear as possible, and he believed if the students continued to work with the staff they would not only get hold of the theory but would get their fingers to act with their will, and then their practice would be equal to that of dentistry in any other country.

Mr. W. SIMMS proposed "The Dental Students," to which Mr. C. H. CARRINGTON responded.

Mr. DAVID HEADRIDGE gave "The Guests and Visitors," which toast was replied to by Mr. G. NASH SKIPP.

Mr. G. C. CAMPION proposed "The President," which was drank with enthusiasm. The toast having been acknowledged, the remainder of the evening was devoted to music.

## MINOR NOTICES AND CRITICAL ABSTRACTS.

### Case of Chronic Neuralgia of the Upper Lip.

By JOHN MARSHALL, F.R.S., F.R.C.S.,

EMERITUS PROFESSOR OF SURGERY, UNIVERSITY COLLEGE; CONSULTING  
SURGEON TO UNIVERSITY COLLEGE HOSPITAL; PRESIDENT OF  
THE GENERAL MEDICAL COUNCIL.

THE following example of an intense and long-continued localised neuralgia of the upper lip presents some features of special interest. The patient, who is a member of our profession, has supplied me with a narrative of his case, to which I have added a



commentary by myself, three illustrative woodcuts with descriptions, and some general conclusions.

*Narrative by the Patient.*—"In December, 1879, I had a fall on the face whilst skating, and broke off part of the inner border of the left front incisor tooth. This border had naturally overlapped nearly half of the right front incisor. The fracture left a sharp, oblique, prominent edge on the remainder of the tooth, which still overlapped the right incisor, so that the internal surface of the upper lip continued to play upon the prominent edge of the broken tooth. In a day or two the friction of the lip against this edge began to give me great uneasiness about the lip, which on examination I found to be very red along the spot which played upon the tooth. I thought little of this at the time, but the redness went on to inflammation and ulceration, which healed by my taking care and using my lip as little as possible for about a week. But the irritation recommenced almost directly when I began again to use the lip in the ordinary way. Knowing that the trouble was due to the irritation of the tooth, which I did not wish to be extracted, I endeavoured by a voluntary effort of the muscles of the upper lip to keep the latter raised off the tooth. This continued strain was very harassing, but I determinedly kept it up for a fortnight, hoping by this means to finally cure the irritation. But at the end of a fortnight, when the ulcer was healed, I found that the effort to keep the lip off the tooth, which was at first voluntary, now became entirely beyond my control, for the muscles of the lip, on the instant that the mucous membrane touched the tooth, fell into the acquired action, raising the lip and slightly dilating the nostril. But, worse than that, I was conscious that this condition continued whilst falling asleep, probably during sleep itself, which was now much disturbed. This state persisted for about three months—that is until March, 1880. The feeling of constraint and stiffness about the upper lip was very distressing, for although the ulceration had healed, the pain now assumed a different type, being deep-seated instead of superficial, and of a dull boring character.

"Up till now, thinking the trouble was due simply to the broken tooth, I had sought no advice; but as matters became no better I determined to seek for this, especially as I was now annoyed in addition by a continual desquamation of thick crusts of the epithelium covering the affected part of the lip. This desquamation always left a raw, moist surface, beneath which in turn other crusts formed, and so on. I therefore consulted a physician, who re-

garded the case as one of eczema of the lip, which would get well under treatment; but it got steadily worse. He then advised extraction of the tooth, to which I submitted; but the involuntary drawing up of the lip still continued, and the pain even increased. At this time (June, 1880) the pain always became worse at about four o'clock in the afternoon, and so quinine was prescribed, but without effect. I often took, in moments of desperation, twenty grains at once, which was followed by quinism, but not by relief. Further medical treatment also proved of no benefit, and this condition continued till October, 1881, when I became a student in London. At this time the pain seemed to be deeply seated in the substance of the lip, and in the soft tissues about the frænum. I always obtained relief by taking the lip tightly between my forefinger and thumb, and squeezing it as firmly as possible, at the same time applying the handle of a spoon, taken out of hot water, against the frænum and the soft parts in its neighbourhood. At other times I was somewhat relieved by forcibly pressing the soft parts near the frænum against the maxillary bone.

"When I commenced my work at a medical school the pain somewhat diminished, and the desquamation of the epithelium was not so abundant; but in March, 1882, both conditions recurred as bad as ever. It was then that, under highly competent surgical observation, a certain hardness of the frænum and the tissues behind it having been detected, these parts were divided *transversely* down to the bone. This operation gave little or no relief, and quinine was again prescribed, but without benefit. In July of the same year, as the case was obscure and nothing could be distinctly recognised as accounting for the pain, I was advised to wait and give up smoking. I gave up smoking altogether for eight months—*i.e.*, till March, 1883; but I was still as bad as ever. It was then proposed to divide the frænum and its neighbouring tissues *vertically* down to the bone, so as to expose and examine the periosteum, which was done, but without affording me any relief.

"I now gave myself up to the use of opium by the mouth, and of morphia hypodermically, whenever the pain was very bad. I continued this practice for more than three years—*i.e.*, till about July, 1886—when I determined to bear the pain; for, being now qualified to practise, I found it impossible to attend to my work whilst under the effects of opium. Ever since that time the pain has continued unrelieved, making life almost intolerable; and it

has retained the same deep-seated boring character, sometimes better, sometimes worse, but every day present, and always aggravated in the afternoon and during several hours of the night. For a time the application of cocaine mitigated the pain, but this also soon lost its effect.

"In August, 1887, it was suggested to me that the persistent pain might be due to osteitis of the superior maxilla, and it was proposed to trephine that bone; but as I could not submit to this operation at the time, and as I also wished for a further consideration of the proposal, that operation was not performed.

"In November, 1888, I sought still further skilled advice, and it was at once discovered that my right antrum was dilated. It was accordingly suggested that this might be the cause of my pain; but as the bony wall of this right antrum had long since been absorbed, and as more than a year previously I had myself several times evacuated its contents without any relief from the pain, which, moreover, was not on the right side of the face, I did not share in the expectation that by curing the cyst of the antrum the pain would disappear. Nevertheless, the dilated right antrum was successfully treated; but the pain in the fore part of the lip never altered in the least.

"Having, soon afterwards, occasion to call on Professor Marshall concerning some private affairs, and having suffered most acutely during the interview, I asked him whether he would examine my mouth. Seeing my wretched condition, and being assured by me that I had abandoned all hope of ever being better, and that I therefore did not anticipate any further treatment, he consented. After hearing the history of the case, and asking if I ever felt the pain extend upwards into the nose, which I always had, but attached no significance to it, he examined further as to the exact course of the pain, and concluded that the neuralgic suffering depended on some long-continued irritation of the mucous membrane lining the left half of the prolabium, and that it affected certain terminal ramifications of the left nerve of the septum nasi. Having subsequently most minutely tested the seat and course of the pain by the use of the intermittent electric current, he suggested a preliminary division of the terminal branches of the left nerve of the septum; this I especially begged him to undertake. The operation was accordingly done under ether, and was followed by immediate and great relief. But as the pain did not entirely disappear, a patch of mucous membrane cor-

responding with the site of the irritation first caused by the broken edge of the left incisor median tooth, together with some cicatricial tissue about the frænum, were removed under the local application of cocaine. The operation on the thickened frænum was first done, and gave no relief; but instantly after the removal of the diseased portion of the mucous membrane within the border of the left prolabium the pain entirely disappeared, and I became as free from pain as ever I was in my life."

*Commentary.*—The interest of this case, thus graphically narrated, consists in its severity, its duration, its obscurity, the simplicity of its final diagnosis, its anatomical and physiological bearings, its pathological significance, its prompt relief and its apparently permanent cure.

It was easy to observe whilst the patient was speaking a certain jerking action about the mouth, which might have been attributed to a slight tendency to stammering, but which obviously implied pain or the dread of pain arising from the use of the upper lip. When the mouth was quiet, the only peculiarity observable was a slight drooping of the fore part of the moustache on the left side; but there was no noticeable difference as regards the thickness of the upper lip on the two sides. On everting and slightly stretching out the lip, there was evident, just within its free red border and near the middle line, a small, slightly roughened, but soft patch of the mucous membrane, surrounded by a narrow and dusky area of desquamation. This patch, which measured on the moderately stretched-out lip about half an inch from side to side and a quarter of an inch in the vertical direction, became nearly circular or even somewhat elongated vertically when the lip was allowed to fall into its ordinary position, and it then corresponded precisely with the now much contracted gap in the dental series and alveolar border of the upper jaw, resulting from the extraction of the broken left median incisor tooth. The frænum of the lip was much disfigured and indurated. On passing the finger-point, even lightly, over the small roughened patch above mentioned, the characteristic pain of which the patient complained was immediately produced, and this was increased in intensity by a ruder friction. Deeper pressure higher up on the inner surface of the lip to the left side of the frænum also elicited the pain, whilst a still harder pressure in a direction upwards towards the left nasal notch was followed by a similar result. No such pain, however, was caused by even rude pressure anywhere else on the left half of

the upper lip, or anywhere on the right half, or on any part of the jaw or its alveolar border, or on the left cheek in the direction or in the neighbourhood of the left infra-orbital foramen, or anywhere else but in the limited situation above indicated.

A more exact trial of the effects of local pressure by means of the blunt end of a silver probe served to demonstrate with increased accuracy the limitation of the hypersensitive area and track, as this extended from the roughened patch on the lip upwards into the nose and on to the left side of the nasal septum. Now, bearing in mind that the central, gutter-like portion of the upper lip, or *prolabium*, is developed in connection with the septum nasi (as is so plainly demonstrated in the deformity of double harelip), and reflecting that its nervous supply might at least, in part, and especially on its deeper aspect, be derived from terminal branches of the *nerves running down the septum*, I came to the conclusion that the intense neuralgic affection from which this patient had so long suffered implicated certain prolabial ramifications of the nerves upon the septum nasi. This conclusion received interesting confirmation from two facts next stated by the patient in reply to my questions—namely, first, that a sniff of cold air up the nose would bring on the pain; and, secondly, that, whilst he thoroughly enjoyed a pinch of snuff taken up the *right* nostril, a pinch drawn up the *left* nostril brought on instantly the characteristic agonising pain.

On the following day I further tested the sensitiveness of the parts affected by means of the intermittent electro-magnetic current; and I found that even when the current was so weak as to cause only the slightest tingling on the surrounding skin and mucous membrane, it made the patient start violently when the small moist pole was applied to the roughened patch on the left half of the prolabium. The track of the pain was, by this sort of *neur-algoscope* or *algoscope*, also quite distinctly mapped upwards through the deep portion of the lip to within the left nostril and on to the septum nasi.

I thereupon advised that two things should be done—viz., first, that the terminal or prolabial branches on the left side of the septum should be divided transversely inside the nostril; and secondly, that, if that operation failed, the patch of diseased mucous membrane, with its entangled nerve ends, should be excised. The first proceeding, I explained, would be not only a remedial measure, but also a physiological experiment, as it

would serve to test the accuracy of my conclusion as to the path of the nerve filaments implicated in the case, and as to the normal source of the nerve-supply to the inner or mucous surface of the prolabium ; whilst the second step, more strictly surgical, could be adopted afterwards if necessary.

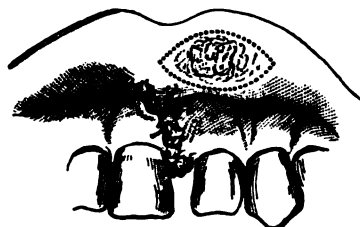
The patient, with a due scientific interest in his own case, consented, but he insisted on my undertaking these trifling operations. Accordingly, on the first occasion, the patient having been etherised, the left ala nasi was held aside, a finger was placed in the right nostril to support the septum, and then the mucous membrane and the subjacent tissues upon the left side of the septal cartilage were divided by a repeated use of the knife along a line extending from the floor of the nasal notch to the tip of the nose, care being taken to feel the cartilage throughout against the edge of the knife. All was accomplished within the nostril, which was then slightly filled with mercurialised wool. On recovery from the anæsthetic the pain was found to be markedly relieved ; there was a slight loss of sensibility in the prolabium—that is, on its free margin and inner surface, but not so noticeably on the cutaneous aspect of the lip ; lastly, the roughened mucous patch was benumbed, so that it could be touched without eliciting the old very severe suffering. The physiological result was so far satisfactory ; but at the end of a further experience of about ten days, as there remained some local tenderness, and, though much modified, a residue of neuralgic trouble, I first cut out, under the local influence of cocaine, a triangular piece of the thickened and disfigured frænum, but without giving any relief. Finally, after a few minutes' interval, the lip being everted, an oval portion of the mucous membrane, including the diseased patch, was lifted up by a fine-toothed forceps, a proceeding which elicited some pain, and was then snipped off with sharp scissors. An instantaneous shock of the old sort of pain caused the patient to leap up from the operating chair ; but almost instantly afterwards he exclaimed, "The pain is gone."

He reported to me, at the end of two months, in the following terms : "I have never even had the slightest return of pain since I saw you. I am perfectly well ; all desquamation of the epithelium, which persisted for a little time after the operation, has long since entirely ceased. I have forgotten, and still forget sometimes, that I have a lip at all ; and I have never been so happy in my life."

He still remains well.

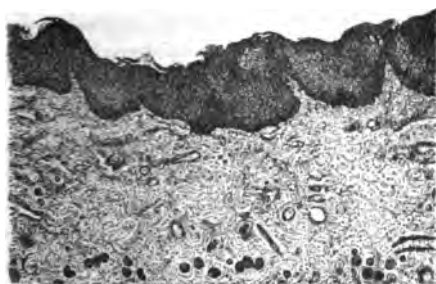
*Woodcuts with Descriptions.*—Fig. 1 is a diagrammatic representation of the everted upper lip, showing the roughened patch on the prolabium, the disfigured frænum, and the contracted interval in the dental border left in the place of the extracted front incisor tooth. The dotted lines show the limits of the portion of mucous membrane removed by the scissors. I may

FIG. 1.



here observe that the wound was just deep enough to expose without dividing the coronary artery of the lip, which was plainly seen, but did not bleed. When the lip retracted and the mouth became closed, the gap on the mucous aspect became vertical, and not parallel with the border of the lip; it was therefore closed by two transverse silk sutures, and healed partly by direct union, but chiefly by granulation and cicatrisation, in about a fortnight.

FIG. 2.



Figs. 2 and 3 are engraved after two micro-photographs taken by Mr. R. W. Boyce, from sections of an excised piece of the lip,

prepared and mounted by him, with the permission of Professor Horsley, in the Pathological Laboratory at University College. Fig. 2 shows a section through the healthy margin of the piece of mucous membrane removed by the operation. Fig. 3 is a repre-

FIG. 3.



sentation of a section through the roughened patch in the centre of this piece. Mr. Boyce has given me the following description of the parts concerned :—

“These micro-photographs were taken with the one-inch objective, without an eye-piece.

“The *epidermis* of the affected area is much thickened and very irregular, cracked and desquamating on the surface. The papillæ are smaller and fewer than in the surrounding healthy zone. The epithelial cells themselves under a high power appear to be slightly swollen, and they stain more deeply with osmic acid. As the nerve fibrils from and between the stunted papillæ break up and form a plexus between the individual epithelial cells, these increased, swollen, and more deeply stained cells may indicate or reflect some early morbid nervé change ; or, on the other hand, these altered and super-abundant cells may have acted by merely mechanical pressure on the minute inter-epithelial nerve fibrils.

“The *subepithelial connective tissue* shows an appreciable increased condensation beneath the thickened plaque ; but even uniformly over the whole portion of the tissue examined there are also slight signs of irritation, in that the number of small round cells is increased, especially in the vicinity of the papillæ.

“The *fine nerves* supplied to the mucous membrane are perhaps less numerous immediately beneath the diseased spot than elsewhere ; but nowhere are there to be seen signs of neuritis or of



actual degeneration. The papillæ are freely supplied with fine branches from the under-coursing nerves, but no special end-organs could be detected in them.

"Interesting are numerous minute sebaceous glands found in that portion of the tissue examined, which was nearest to the free border of the lip."

*General Conditions.*—In the first place it may be asked, What was the *nature* of the local disease? Now, besides the well-marked, although incomplete, relief afforded by the division of the inferior branches of the nerves on the left side of the septum, it is obvious that the instantaneous and apparently persistent cure resulting from the excision of the diseased patch of mucous membrane, with of course the terminal nerve fibrils in it, points to the presence here, not of a central, but of a peripheral neuralgic affection. The absence in so prolonged a case of the evidences of local neuritis and of any later degenerative changes in the nerves ramifying in and beneath the mucous membrane proper confirms this view; although it must be confessed this was not my expectation, for I certainly had supposed, in explanation of the extraordinary sensitiveness of the part affected, that some enlargement of possibly existing end-organs or sensitive plaques, or some minute neuro-matous condition, or some other well-marked evidences of nerve change might have been met with. The actual appearances are indicative merely of a *hyperplasia*, or a rapid continuous overgrowth of new epithelial cells, roundish, soft, and not readily disposed to become flattened out and hardened so as to be more or less protective, but each the carrier, in this immature stage, of its proper delicate and highly sensitive terminal nerve fibrilla or fibrillæ. This condition would seem rather to suggest a local disease more or less resembling a *soft corn*, and not a true warty growth; for the papillæ, far from being hypertrophied, were fewer, smaller, and shorter in the centre of the diseased patch than in the healthier parts around it—a condition due probably to the very superficial ulcerations mentioned in the history of the case. The absence of enlarged papillæ, and of the smallest indication of the penetration of epithelial cells into the subjacent vascular tissue either in the form of processes or nests, even after a continuance of the irritation for so many years, completely negatives the supposition of the local affection being of an epitheliomatous character—an apprehension not unnaturally presenting itself to the sensitive professional imagination of the patient. It may in this respect be

noted as important that the long-continued irritation of the mucous membrane had not, in this case, at least, induced a malignant condition of the parts. The manifestation of a certain periodicity in the neuralgic attacks justified some apprehension as to the possible co-existence of local vascular disturbances, or some other morbid changes, giving rise to persistent functional disorder in Meckel's ganglion or in the Casserian ganglion, or in a still more central situation. But the periodicity in question might have been due solely to the local irritation dependent on the diurnal use or exercise of the lip. It is noteworthy that it was not relieved or cured by even large doses of quinine. Finally, the absolutely complete and persistent relief of the pain which has followed the removal of the local disease negatives the fear of the existence of any serious central mischief either in ganglionic or in a sensitive nervous centre. There seems accordingly ground for the opinion that the patient, as he himself believes, is now permanently cured. —*The Lancet*.

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#### The "Lancet" and the Hyderabad Chloroform Commission.

WE have received by mail a copy of the *Deccan Times* containing an interesting account of a banquet given in honour of the members of the Hyderabad Chloroform Commission by the Nawab Intesar Jung, on Tuesday, Nov. 12th. The dinner, to which 140 guests sat down, was given in the beautiful ball-room of the new Secunderabad Club, and left nothing to be desired as regarded the perfection of the arrangements and the quality of the viands. After the usual loyal toasts, the Nawab proposed the health of the Minister, Sir Asman Jah, who responded in the Urdu language, a translation of which was afterwards read by the Minister's secretary. The Minister, in proposing the health of the members of the Chloroform Commission, went into the history of the circumstances leading up to the appointment of the Commission with a view to settling once for all the vexed question of the attributes of chloroform. The Minister's concluding words were as follows:—"To enable Dr. Lawrie to bring about such an inquiry, his Highness was pleased to place a generous donation at his disposal, and the proposal being communicated to *The Lancet*, perhaps the first medical journal of the world, the con-

ductors of that periodical induced Dr. Lauder Brunton, whose name stands foremost in this branch of research, to go out as their representative. The Government of India has also been pleased to depute Surgeon-Major Bomford, a distinguished member of the Indian Medical Service, to assist at the conference. Experiments are performed daily at the Residency Medical School on dogs and monkeys, in which the effect of chloroform on the heart and on respiration is noted by means of instruments of marvellous delicacy, such as perhaps have never before been used in India. Now I venture to say that we Mohammedans are peculiarly entitled to sympathise with the objects of the Commission, for we were the first originators of that experimental research which, in the hands of Europe, has led to such magnificent results. The seed was sown by our ancestors, and nourished with the waters of the Euphrates and the Guadalquivir. Chloroform and ether, and some other wonderful agents, have been obtained from substances first discovered in the laboratories of a Razi, a Jubair, or an Ibu-i-Yunus. Mussulman surgeons were the first to make use of the actual cautery, and they invented instruments for midwifery and for ophthalmic surgery. Ibu-i-Haisum, known to Europe as Al Hazen, discovered the weight of the atmosphere, and fixed its height at fifty-two miles; enunciated the principle of aberration in optics; and almost reconstructed that science on mathematical principles upon the scant foundation laid by the Greeks."

Dr. Lauder Brunton, on rising to reply, was greeted with loud and continued applause. The following is an abstract of Dr. Brunton's remarks:—"I cannot readily find words to express my sense of the honour that you, our host, have done to me and to the members of the Hyderabad Chloroform Commission in inviting us here to-night. My enjoyment to-night is alloyed by pain that I am unable adequately to express my sense of the generosity of the Nizam's Government, and of all the kindness shown to a stranger like myself since my arrival in Hyderabad; yet this pain enhances the pleasure which the undeserved and generous kindness affords. But the saddest thought with which our pleasure is mixed is one which is nevertheless itself the cause of our pleasure to-night—viz., that all over the world men and women and children are suffering from pain and calling for relief which it is not always in the power of medical art to afford. In the speech which you have just heard from our host, all the

essential points in regard to anæsthetics have been so clearly put that it is quite unnecessary for me to say more about them ; I may merely repeat that the questions which the Hyderabad Chloroform Commission has to settle are : Why do deaths occur during the administration of anæsthetics ? How are they to be prevented ? Some men are inclined to think that some such deaths are inevitable ; whereas others, like my friend Surgeon-Major Lawrie, consider that they are quite preventable, and that anæsthetics (and especially chloroform) may be always administered with safety provided proper care be taken. This is a question upon the solution of which so much depends that for the last forty years or more men have been trying all over the world to solve it. But all this time Governments which would spend millions upon appliances for destroying life have shown a singular apathy regarding means of saving both life and suffering. It has been reserved for the Nizam and his able Minister Sir Asman Jah to appoint a commission specially to investigate the action of chloroform and solve, if possible, the important questions which I have just mentioned. As our host has said, there is a peculiar appropriateness in this appointment being made by the Nizam's Government as a great Mohammedan power, for in the middle ages, when the arts and sciences were almost lost in Europe, they still flourished at Bagdad and Cordova, and to the Saracens and Moors we owe the preservation of much medical lore which would otherwise have been lost. Especially did they direct their attention to the great practical point of the treatment of disease and the use of remedies, and in my own studies on the action of medicines I have had occasion to consult the works of Avicenna. Nor has the Nizam in the appointment of this commission followed the tradition of the Mussulmans only in the nature of the subject selected, for in the liberality with which he has carried out the scheme he has rivalled the generosity of Haroun-al-Raschid at Bagdad, and Abdulrahman at Cordova. I may perhaps be permitted to say that, although I have worked in laboratories in London, Edinburgh, Leipsic, Vienna, Berlin, Amsterdam, and Paris, and although no words can express my obligations to the directors of these laboratories for all the benefits I received at their hands, yet in none of them have I found the same facilities for work as at Hyderabad. For here we have all the apparatus required. Whenever anything is asked for it is at once supplied ; dogs and monkeys on which to test the action of

chloroform are provided in abundance, and of the willingness and ability of our assistants it would be impossible to speak in too high terms. By an improved method of recording our experiments we shall be able to render the records as readily available for examination and criticism by scientific men at the Antipodes as they are here, and a hundred years hence as they are now. As experiments are self-recording, they are also free from any possibility of the result being modified by a bias in the minds of the Commission, and whatever men may say to our conclusions it is impossible for them to challenge our facts. It may be hard in the space of a few weeks to settle a question that has remained without a certain answer for more than forty years, but, nevertheless, we hope that we shall be able to produce an array of facts such as shall carry conviction to the minds of all unprejudiced persons, and which, we trust, will be of such practical utility in helping to prevent suffering and preserve life, as to justify the great liberality of the Nizam's Government, and lead other Governments to follow the noble example so generously set by that of the Nizam."

Dr. LAWRIE, in a brief speech, explained that the work of the Commission was being carried on with perfect harmony, and with only one object in view—namely, to arrive at the truth.—*The Lancet*.

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### Illegal Medical Practitioners in Birmingham.

IMPORTANT PROSECUTION.—At the Birmingham County Court, before his Honour Judge Chalmers, the case of the Society of Apothecaries against Alfred Brown, of Brunswick House, 3, Braithwaite Road, Birmingham, was called on. Mr. B. Weekes (Messrs. Weekes, Howlett and Co.) said he appeared for the Society of Apothecaries of London, who sued the defendant for the recovery of a penalty of £20 under the Apothecaries Act for illegally acting as an apothecary by attending and advising patients and furnishing medicine. The defendant was liable to a penalty of £20 in each case, but in the four cases which he had attended and named in the plaint only one penalty was claimed from him, the object of the society being merely to put down these illegal practitioners. There were two classes of illegal practitioners in Birmingham—one being a section of men who held

themselves out to cure certain private diseases, and of whom the rich and well-to-do were the principal customers, a class of practitioners with which there could be little sympathy. The other class of illegal practitioners, of which the defendant was a specimen, consisted of men who held no legal qualifications entitling them to act as medical men, yet they opened a respectable-looking house, put up a speaking tube and a night bell, and placed their name on a lamp, making such outward show that the poor and ignorant mistook them for properly qualified medical men. There were a large number of deserving, struggling poor people in Birmingham, as he (Mr. Weekes) knew only too well from his practice in the Coroner's Court, whose feelings would not allow them to accept of parish relief, and who scraped together a small sum of money with which they went to the nearest doctor, and asked for his attendance. There were many properly qualified medical men in Birmingham who attended such cases for small fees. Taking advantage of this, the defendant and a number of his class opened similar houses in Birmingham. The poor, however, who went to them were deceived in two ways: They failed to get for the money they paid that skill which a properly-qualified medical man would be able to give, or, in the event of death unfortunately ensuing, the relations found that they were unable to get from the unqualified medical man a certificate of death. The consequence was that application had to be made to the coroner, and in many cases inquests were the result. The holding of the inquests was, of course, an expense to the ratepayers at large, whilst the pain of beholding such an inquiry was inflicted upon the relatives. It was this class of imposition that the Apothecaries' Society, at the instance of properly qualified medical practitioners in Birmingham, desired to put an end to. Mr. Weekes said the defendant had signed a confession admitting that he was liable for the penalty, and had offered to pay by instalments £1 a month, but he (Mr. Weekes) was instructed that the defendant was in a good position and able to pay forthwith. The object of the Act was to inflict a penalty as a species of punishment, and its object would be defeated if the defendant was allowed to pay by instalments. The defendant, who appeared in person, said he was unable to pay, as he was very poor. In reply to his Honour, Brown said the furniture in his house belonged to his wife. His Honour: I find that furniture in most defendants' houses in Birmingham does. Mr. Weekes produced a photograph of the defendant's house, which

Brown admitted was a correct one, and this showed a large and respectable residence. Defendant admitted, in answer to Mr. Weekes, that since the issue of the summons he had left the house and removed his furniture to another, which was taken in his wife's name. His Honour: The usual order is fourteen days. Mr. Weekes: I am instructed to press for an immediate order, otherwise we have reason to suppose that the defendant may again remove his furniture. His Honour: Very well; I will make the order for payment forthwith.

At the Birmingham County Court, before his Honour, Judge Chalmers, the actions by the Apothecaries Society, London, against Jesse Key, of 97, Hill Street, and William Welch, of 19, Hurst Street, trading as J. and W. May, came on for hearing. The actions are brought against the defendants to recover penalties for attending, advising, furnishing and supplying medicines as an apothecary without being duly certified or qualified. Two penalties of £20 each are claimed from Jesse Key for attending Detective Blizzard and B. B. Thomas; and one penalty of £20 from Welch for attending Thomas. Dr. Showell Rogers appeared for the plaintiff society, and Mr. Stanbury Eardley for Welch. Dr. Rogers applied for an adjournment of the cases, on the ground that one of the principal witnesses was absent. Mr. Eardley objected to the adjournment. He pointed out that this was a penal action, and that the informant, a police constable or the city authorities, was entitled to half the penalty. He thought it very wrong that that informant should be a policeman. Dr. Rogers said that the city authorities would not be entitled to half the penalty. As a matter of fact, the informant was not a policeman; there was a policeman to be called as a witness. An adjournment till January 13th was granted in each case.

### Strychnia in Poisoning by Ether or Opium.

DR. G. A. GIBSON advocates the hypodermic employment of strychnia in case of narcotic poisoning (ether, opium, &c.), where failure of the heart or respiration threatens.

Failure of the respiratory centre is indicated by very rapid breathing, or irregular and interrupted breathing. The good effect is immediately shown by a more regular rhythm, and greater depth of

the respirations, and in cases where the breathing has ceased it has again commenced after the administration of the strychnine.

In poisoning by opium the stomach should be emptied by sulphate of zinc in doses of twenty grains in hot water and the patient kept awake by tapping the forehead with the tips of the fingers, pinching the arms or legs, or pricking the skin slightly with needles. If this is insufficient the cold douche may be employed.

Keeping the patient in the horizontal position, the respiration is to be carefully watched, and if there should be the least sign of irregularity, or shallowness, or inequality in the breathing, one-hundredth or one-fiftieth of a grain, according to the age of the patient, of sulphate of strychnine should be administered subcutaneously, and may be repeated at intervals of an hour two or three times. If, in spite of the strychnine, the respiration becomes very feeble or ceases entirely, artificial respiration must be commenced promptly. The most convenient method to employ is that of Sylvester; and it should be persisted in until, on the one hand, the respiration is carried on by natural means, or, on the other, the heart has for half an hour ceased to beat.

In ether poisoning strychnia is clearly indicated and should be given as heretofore directed.

If the circulation threatens to fail in consequence of the poison affecting the motor mechanism, or of spasm of the arterioles caused by deficient oxygenation of the blood, it also will require prompt attention. The use of the strychnine is of service as a stimulant to the motive centres of the heart, and may be aided by the employment of ammonia.

Dr. Gibson believes that physicians should carry tablets of strychnia with their hypodermic syringe and recommends the tablet of a reliable English chemist (*Practitioner*). In this country the best hypodermic tablets are manufactured by Parke, Davis and Co., of Detroit, Mich., and are equal to the English make.—*The Therapeutic Analyst*.

### Deaths under Chloroform.

WE have to record yet another fatality under chloroform. M. F——, a woman aged forty-one, was admitted into the Samaritan Hospital for Women, Marylebone Road, on November



27th. On Monday, December 2nd, it was decided to operate upon her, and, in accordance with the routine custom of the institution, chloroform was administered from a Junker's inhaler. When half-way through the operation, the patient showed signs of dangerous depression, the pupils became widely dilated, and the respiration and heart's action ceased. The medical evidence given at the inquest was to the effect that the patient died from syncope produced by the chloroform inhalation. The same authority stated that this was the only death which had occurred at the Samaritan Hospital, as a result of an anæsthetic, out of a total of 4,000 administrations. According to Richardson, the mortality under chloroform is 1 per 2,500 or 3,000, while Coles of Virginia gives it at 52 deaths in 152,260 administrations, or about the same percentage. Authorities vary widely in their estimates, some placing the mortality far higher and others stating that these figures are too high. While a certain number of patients probably lose their lives through lack of care or experience upon the part of the chloroformist, others—as in the case of Mr. Clover working with his dosimetric method, and in the case under comment, when every care and the utmost skill failed to ward off a fatal result—appear to succumb to the depressing action of the drug. It is an incontestible fact, to which regard is sometimes not given, that in proportion to the length of time the patient is subjected to the action of chloroform is the danger of failure of the vital processes increased. Deaths under chloroform have occurred when almost every form of inhaler has been employed, so that, although many possess especial merit—and notably Clover's, which but for its cumbersomeness would have become more popular—none can be said to do more than assist the efforts of the administrator to maintain the vapour within safe limits.—*The Lancet*.

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A PATIENT, aged sixty-five, was admitted to the Queen's Hospital, Birmingham, with a tumour in the abdomen. An exploratory operation being decided on, and the patient assenting, chloroform was administered by one of the house-physicians. Before complete anæsthesia had been attained, and before any attempt had been made to commence the operation, the patient suddenly gave one or two gasping inspirations and then ceased to breathe, and the heart stopped. Every effort was made to

restore him, but without avail. The heart was carefully examined the day before the administration, and was believed to be quite healthy—an opinion confirmed at the *post-mortem* examination, when no morbid condition was found in that organ. There was malignant disease of the stomach.—*British Medical Journal*.

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WE reprint the two following paragraphs from *The Medical Press* of November 6th and November 20th respectively :—

### The Use of Antiseptics in Dentistry.

It is quite certain that cleanliness and the use of antiseptics in the practice of surgery have come to be regarded as the basis of the successful treatment of wounds, and we take it that what is applicable in this respect to general surgery is equally to be applied to the special branches of the surgical art. Dental forceps and the various other appliances and instruments which form the armamentarium of the nineteenth century dentist, owing to their particular construction, demand careful and thorough cleansing. A few moment's reflection upon the nature of the work they are designed to accomplish will clearly show how necessary a procedure such cleansing becomes. The mouth, for example, is a vast store-house for germs, and is the seat of certain diseases, whose propagation by contagion has been repeatedly verified. Special mention may be made in this regard of syphilis and diphtheria. It is quite possible to conceive that the contagion of either of these disorders could be conveyed through the medium of dental forceps whose perfect cleanliness had been inadvertently overlooked. Indeed, judging from some facts which have been brought to our knowledge within the past few days, it would seem that one of the diseases above referred to had been so propagated. Cases of this description of course are fortunately supremely difficult of proof, and we presume could only very rarely occur. But the possibility of the occurrence of any such untoward event having been admitted, it would seem to follow as a matter of course that the dental practitioner would exercise a zealous watch over the cleanliness of his instruments. There are so many effectual and facile means of sterilising the latter, or rendering them antiseptically clean, that the adoption of the particular method of giving effect to the practice is merely a matter of detail. We do not know to

what extent dentists use antiseptics in their practice, but assuming for the moment that they do not, we cannot see that they would lose in any way if they did. Rather, the principle concerned being a sound one, its enforcement, as we strongly believe, would only be productive of good.

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### Dirty Instruments.

It is curious that the remarks which we published in these columns a fortnight ago upon the subject of the use of antiseptics by dentists should have so speedily been confirmed, at all events in one particular instance. We expressed the opinion that unless the instruments used by dentists were kept antiseptically clean, it would be quite possible for certain diseases, as, for example, syphilis or diphtheria, to be transmitted from one patient to another during the progress of dental operations. Lancereaux has just recorded the death of a lady of 36 years, who came to him suffering from syphilitic lesions which had their origin in the mouth after a dentist had been attending to her teeth. He forcibly points out that dentists and hairdressers should use the greatest care in keeping their instruments rigorously clean, and as it is impossible to have special and separate instruments for each person, cleanliness should be secured by immersing them in disinfectants, especially in the case where the forceps and so forth are in frequent use by dentists. He records at the same time another case, that of a man of 53 years, with an acneiform syphilide contracted after catheterism of the Eustachian tube. Further comment upon this subject is unnecessary; the facts speak for themselves.

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### Ammonia in Cocaine Poisoning.

A CASE of poisoning by a very moderate quantity of cocaine is reported by Dr. Golovkoff, in the proceedings of the Caucasian Medical Society, where ammonia was used with good effect to restore the patient. The patient was a somewhat delicate woman, who was suffering severely from toothache. The pain becoming unbearable, Dr. Golovkoff injected fifteen minims of a two per cent. solution of the hydrochlorate of cocaine under the skin of the

left cheek, which gave relief for three or four hours, when the pain returned as acutely as ever. A second fifteen minims were injected, and in about five minutes' time the patient became restless, her pupils dilated, the surface of the skin became pale, the pulse and likewise the respiration became rapid, and shivering came on ; the respiration soon ran up to 200 per minute, and was laboured. A curious effect, too, was produced on the sounds of the heart, causing them to be audible at the distance of two paces from the patient. There was great pain over the cardiac region and back, together with a dread of death and convulsive movements of the limbs. There was some liquor ammoniæ at hand, and this the patient was given to smell and a few drops were given internally every five or ten minutes. Amyl nitrite was also employed, but the latter seemed to do more harm than good, while the ammonia soon brought the pulse and respiration, and indeed the general condition of the patient, into something more like their natural condition, so that in about a couple of hours she had quite recovered. Dr. Golovkoff remarks that the only case he has been able to find in medical literature where ammonia was used as an antidote in cocaine poisoning was one by Dr. Gooding of Barbadoes, reported in *The Lancet* of 1888, vol. i., p. 394, and copied into the *Méditsinskoe Obozrénie*. (This was the case of a negress who had developed alarming symptoms after less than half a grain had been injected into the gum ; she was treated by hypodermic injections of ether and ammonia.)—*The Lancet*.

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### Who Discovered the Teeth in Ornithorhynchus?

IN *Nature* of November 14 (p. 31), Professors Flower and Latter criticise my note which appeared the week previous (November 7, p. 11), concerning the discovery of teeth in the young *ornithorhynchus*. They promptly dismiss my claim that Sir Everard Home discovered the teeth of the young *ornithorhynchus*, by stating that the structures described and figured by Sir Everard are the well-known cornules of the adult animal.

If they will take the trouble to turn to the plate cited by me—namely, plate lix. of the second volume of Home's "Lectures," 1814—and will read the accompanying explanation, they will see that Home was familiar with the teeth of both the young and the old animal.

For the benefit of those who may not have access to Home's "Lectures," I here reproduce outline tracings of two of his figures. Plate lix., fig. 2, shows the teeth of the *young ornithorhynchus*—the "first set," as Home says, "to show that there are two grinding teeth on each side." The next figure is a similar tracing from the succeeding plate in Home's "Lectures" (Plate lx.), which represents, to again use Home's words, "the under jaw of the full-grown *ornithorhynchus paradoxus*, to show that there is only one grinder on each side." Both of these figures are natural size.

In the face of these *facts*, further comment seems unnecessary.

I admit, of course, that Home did not discover the chemical composition of the teeth of the young animal—this was Poulton's discovery.

C. HART MERRIAM.

Washington, D.C., November 30.

[We do not reproduce the outlines sent, as anyone interested in the subject may see the originals, not only in Home's "Comparative Anatomy," but in the Philosophical Transactions, where they first appeared.—ED. *Nature*.]—*Nature*.

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### Menthol in Neuralgia.

MENTHOL has a distinct use in relieving neuralgias of the fifth nerve and other local painful affections. Its local employment, either in stick or in plaster, is very popular. It is, in fact, a local anæsthetic, and, moreover, when applied in plaster, gives a comforting sense of warmth to the painful part. Its action, so applied, is not, however, very powerful. Its internal administration has been advised by Dana for many painful affections. In doses of five to twenty grains it gives a pleasant feeling of warmth, while it stimulates the cardiac action, without increasing its rapidity, and raises the arterial blood pressure. But the chief action noticed was that it relieved pain. It was found especially valuable in migraine and supra-orbital neuralgia, and in the headaches of neurasthenic and anæmic patients. In some cases of sciatica relief was obtained; thus adding another drug to the multitude which may be used, often without effect, in this neurosis. Dana goes so far as to recommend menthol in preference to antipyrin in certain cases, in weakly and anæmic individuals in whom the administration of antipyrin is not without danger, owing to its tendency to produce collapse.—*British Medical Journal*.

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### Chloroform Prepared from Acetone.

· WITHIN the last few years the preparation of chloroform from acetone has to a great extent replaced the old method of manufacturing from alcohol. The chloroform obtained by this process is less liable to contain those chlorinated products to the presence of which the alarming symptoms which have sometimes followed the inhalation of chloroform have been attributed by some. This mode of preparation was indicated by Liebig as far back as 1832, and the reason of its recent employment in the manufacture of chloroform is due to the fact that acetone can now be prepared at a cheap rate and perfectly pure. Messrs. J. F. Macfarlan and Co., of Edinburgh and London, have sent us a sample of a quantity of chloroform prepared by them from acetone in 1880. We have submitted it to a thorough examination, and find that it is a very pure preparation. The fact that it has kept since 1880 without any alteration is a great point in favour of chloroform prepared from acetone.—*British Medical Journal*.

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### Bromide of Potassium as an Antidote to Iodoform.

A CASE of resection of a carcinomatous rectum developed symptoms of poisoning through the use of iodoform. Under the use of bromide of potassium rapid relief was obtained. This condition is explained by Samter and Retzlaff as due to the fact that bromide of potassium exceeds all other salts in its power for dissolving iodine compounds. They state that if a test-tube be half filled with a solution of potassium bromide (1 to 3), fifty drops of tincture of iodine may be added without the iodine being displaced from its solution with the potassium bromide. This condition persists for several days, and bromide of potassium, of all the different salts recommended in iodoform-poisoning, is the only one which is capable of retaining the iodine in permanent solution.—*Wiener med. Blatter*.

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### Shall Paupers have Knives and Forks ?

THE subject of a recent discussion of the Chester Guardians was a strange one—whether it would be advisable to allow the inmates of the workhouse to have knives to cut their meat. At

present they have to tear the meat to pieces with their fingers and teeth. The Rev. O. Rawson proposed that knives and forks should be bought. To have paupers pulling the meat to pieces with their fingers was, he urged, a disgrace to the guardians. However, Mr. Charmley, a farmer, opposed the proposal, saying he had often enjoyed a meal sitting under a hedge without any knife or fork. On this the Chairman observed that although Mr. Charmley might have done without a knife and fork behind a hedge, he ate his meals at home with them. The motion to hire knives and forks on Christmas Day only was put, and carried by thirteen votes to ten.—*Pall Mall Gazette*.

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### The Medical Sickness, Annuity, and Life Assurance Society.

MANY communications have been forwarded to this office, and to the offices of the Medical Sickness, Annuity, and Life Assurance Society, asking for an extension of this Society to the Colonies. In respect to such applications we are asked to state that it is not found possible to extend the operations of the Society beyond Great Britain; and, if it were necessary, it is open to colonial bodies of medical men who may desire to follow in these steps to form a society on a local basis. The question of examination and of periodical payments of life and sickness premiums require careful local supervision.—*British Medical Journal*.

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### OBITUARY.

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WE regret to have to record the death of Mr. E. Wade, J.P., of York. Mr. Wade attained his eightieth year in August last, and it is a quarter of a century since he retired from professional work. In the discharge of his aldermanic duties for eighteen years Mr. Wade earned the deepest respect of his fellow townsmen—a feeling which found expression in a handsome testimonial presented to him in 1875 by the members of the council and other gentlemen. Mr. Wade's death called for a public expression of regret from the Lord Mayor.

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WE regret to announce the death, at the comparatively early age of fifty-eight, of Joseph Holland, L.D.S. Eng. & Edin. (of Sloane Street). Mr. Holland was a pupil of Mr. White, of Norwich, and had been in practice for thirty years. He died of paralysis after an illness of twelve months. He held several honorary appointments, and was universally respected.

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## ANNOTATIONS.

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1890.—From a journalistic point of view we look forward to the coming year with a great deal of confidence. We are starting under new auspices and already begin to feel the effects of energy and "go" in the publishing department. At the beginning of a new year, and a new era in the life of the Association Journal, we feel that we could not choose a more fitting time to call upon our readers and members to help us in the conduct of the Journal by contributing practical suggestions, and all the items of professional interest and information in their power. The Association is steadily increasing in numbers and influence. It has become recognised throughout the country as *the* representative Dental Society of the United Kingdom. In a few years' time there will hardly be any dental surgeons of respectability and repute who are not also members; and during the last four years the circulation of its Journal has nearly doubled. In view of these facts, the larger and more widespread the interests involved, the more essential it is that we should have the loyal co-operation of members in forwarding the work.

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INTERNATIONAL MEDICAL CONGRESS.—Arrangements are already in progress for holding the tenth International Medical Congress at Berlin from the 4th to the 9th of August next. Dr. Rudolf Virchow has been appointed President, Drs. von Bergmann, Leyden, and Waldeyer, Vice-Presidents; Dr. M. Bartels, and Dr. Lassar (19, Karlstrasse, Berlin, N.W.), Secretary-General. The special committees of organisation are arranged for the various sections, which comprise Anatomy, Physiology, Pathology, Pharmacology, Internal Medicine, Diseases of Children, Surgery, Obstetrics and Gynæcology, Neurology and Psychiatry,



Ophthalmology, Otology, Laryngology, Dermatology and Syphilography, Diseases of the Teeth, Hygiene, Medical Geography, State Medicine, and Military Hygiene. Invitations have been sent to the profession in England, and the subscription for members is fixed at £1, for which a copy of the Transactions will be sent. The official languages of all the sittings will be German, English, and French, and introductory addresses will be limited to twenty minutes, and speeches in the discussions to ten minutes.

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SECTION fourteen will be devoted to dental and oral surgery, and may be anticipated to maintain the prestige achieved by its predecessors at the Congresses of London and Washington, more especially as the constitution of the Committee of Organisation is in itself a sufficient guarantee of efficiency. This Committee consists of the following well-known members of the dental profession: Professor Dr. Busch, Berlin, Chairman; Dr. Calais, Hamburg; Dr. Fricke, Kiel; Professor Dr. Hesse, Leipzig; Professor Dr. Holländer, Halle; Professor Dr. Miller, Berlin; Professor Dr. Sauer, Berlin; Dr. Paetsch, Breslau; Dr. Weil, Munich. The general secretary is Dr. Lassar, Karlstrasse 19, Berlin, N.W., Germany. It is proposed to elect three honorary presidents and a secretary to represent Great Britain. The statutes of the Congress require all members to be legally qualified practitioners of the country of which they are subjects. The work of the section will be divided as follows:—(1) Discussions on three general subjects. Each of these discussions will be introduced in one of the three official languages of the Congress, viz., German, French and English. The German subject will be "Bromæthyl," but the others have not yet been decided. (2) Reading of Papers, of which a short extract or table of contents must be sent in beforehand. (3) Practical Demonstrations in all departments of dentistry. (4) A Museum of Exhibits. In order to facilitate arrangements correspondence on the dental section may be addressed as follows:—In German, to Professor Dr. Busch; in French, to Dr. Calais, Hamburg; and in English to Professor Dr. Miller, W. Vosstrasse 32, Berlin. The rules, programmes, and daily announcements will be published in all three languages. Papers read before the sections will, as a rule, be limited to twenty minutes, and speakers in the discussions to ten minutes each. Students of medicine and others, whether male or female, who are not physicians, but who take special

interest in the proceedings of the various sections, may be invited by the president, or may be permitted on application, to attend the sessions as visitors.

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**HYPODERMIC INJECTIONS OF ERGOT IN FACIAL NEURALGIA.**  
—A contemporary (*Peoria Med. Mo.*) states that for the relief of facial neuralgia hypodermic injections of ergot are incomparably superior to aconite or gelsemium. "I have used it the last six years, and have never had it fail in but one case. In that case there was evidently organic disease. Ordinarily one injection relieves the pain permanently; sometimes two; and in one very severe and obstinate case which had gone through the hands of several physicians without relief, it required three. After the third injection he never had a twinge of pain. I put it in the temple, as nearly over the seat of pain as convenient. I used the plain extract, and have it made on purpose for hypodermic use. One minim represents two grains of ergot. Of this I use from eight to twelve minims blood-warm at one injection and without diluting. In order to make this a success, two things are essential. One is, to have a fresh and pure article of ergot to make the extract from, and the other is, to have the extract reasonably fresh. If kept long, it is not only worthless but irritating. When properly prepared and fresh, it produces more or less pain for ten or fifteen minutes, and when the pain from the injection subsides the neuralgia is usually gone and does not return."—*Dr. Stewart.*

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**SUBSTITUTE FOR MOTHER'S MILK.**—George Smith, F.C.S., has an exhaustive article upon the dilution of cow's milk in infant feeding, in the *Pharmaceutical Journal*. He recommends the following formula for infant's food, as closely approximating to the constituents of human milk:—Finely ground oatmeal, 3 ii.-iv.; fresh butter, 3 i.; sugar of milk, 3 ii.; fresh cow's milk, 3 vi.; pure water, 3 iv.; salt, grs. v. Mix gradually the water with the oatmeal, milk-sugar and salt, so that no lumps are formed in the mixture, then add the milk and butter, and heat to the boiling point in a clean, enamelled saucepan. The product should be made up to the measure of half-a-pint, if necessary, and given lukewarm with a spoon when required. The oatmeal

was introduced as a useful attenuant, and it has been found to act as a laxative, and also as a direct fat and heat-producer in the process of digestion. The process of feeding with a spoon is at first troublesome, but it is to be preferred to the use of a feeding-bottle, as, if care be taken to have all the vessels employed scrupulously clean, the infant will enjoy an immunity from thrush (*Oidium albicans*), diarrhoea, and other diseases that follow in their train.—*The Therapeutic Analyst*.

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THAT delightful veteran, Oliver Wendell Holmes, is very keenly alive to the advisability of taking advantage of all those "aids to living" that modern science has devised. Surely he of all people is most entitled to all that science can do to alleviate the physical disabilities of old age, who has done so much to lighten the labours of humanity of all ages. In the current number of the *Atlantic Monthly*, in the course of a bright and chatty article on old age which is well worth any one's reading, he once more pays a tribute to dental science: "If the grinders cease because they are few, they can be made many again by a third dentition, which brings no toothache in its train."

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WE read in an Australian contemporary (*Town and Country Journal*, New South Wales), that "the patching up process in connection with the human frame has advanced another step. Teeth, hair, eyes, and even noses and finger joints have been in vogue a long time, to say nothing of cork legs and feet. But it remained for an enterprising individual at Islington, London, to invent 'cheek pads,' which are readily bought up by ancient and cadaverous-looking ladies and gentlemen at five guineas per pair. They say 'cheek pads' make an elderly individual look ten years younger." There is nothing new under the sun, but we hardly expected that our old, old friends "plumpers" would pose as novelties. The enterprising genius in Islington can make many more discoveries of an equally valuable order; he might invent vulcanite work and the rubber dam next.

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ANTIPYRIN.—We copy the following from the *Practitioner*:—The use of antipyrin is contra-indicated: (1) in all cases of cardiac

weakness ; (2) in diphtherial affections in which there is evidence of myocarditic lesion ; (3) after exhaustive hæmorrhages ; (4) during menstruation and dysmenorrhœa ; (5) in catarrhal pneumonia generally, and lobar pneumonia when there is œdema of the lungs—heart failure ; (6) in the latter stages of tuberculosis ; (7) in all cases of great debility and exhaustion and in the latter stages of long-continued fevers. It is believed that the foregoing contraindications with regard to the administration of antipyrin and similar medicaments will receive the approval of physicians generally.

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THERE is no limit to modern "enterprise." An evening contemporary publishes the following :—"A Washington dentist recently advertised that he would give 100 dollars for a perfect front tooth of a healthy young white man. This is frequently done, the doctor says, but is a very difficult operation. Sometimes as many as twenty applicants who wish to dispose of a tooth will be examined before the exact kind will be found, and when the right one is selected it is extracted and planted in the jaw of the other party at the same operation."

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MR. W. HERN, who, as many of our readers will remember, was lately the recipient of a silver salver from the Students' Society of the Dental Hospital of London, on the occasion of his marriage during his year of office as President, desires through our columns to testify his sincere thanks to the many subscribers who were unable to be present at the meeting, and whom he has therefore no opportunity of thanking in person.

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THE blocks of tickets issued for the raffle for antique silver at Dublin, in connection with the coming Fancy Fair, need not be returned until February 3rd, 1890. The drawing is expected to take place on the 8th, and the winning numbers will be published in the February number of the Association Journal, and in the *Times* of February 17th.

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WE regret to hear that Mr. Waite, for so many years the secretary to the Midland Branch, is dangerously ill with inflammation

of the left lung and pleurisy. At the time of going to press Mr. Waite was not out of danger. We shall await with anxiety the news of the next few days.

MANY of our readers may be interested to know that most exquisite micro-photographs of any preparation may be obtained at a small cost from the London Photo-micrographic Company, High Street, St. John's Wood. The company get very good results with high powers, and any specimen sent to them will be photographed according to directions. This company will prove the greatest possible boon to microscopists.

WE are requested by Messrs. Smale and Canton, on behalf of the "Turner Portrait Fund Committee," to say that it is proposed to close the subscription list at the end of this month, and therefore any gentleman who has not subscribed and is desirous of doing so is requested to send his cheque either to Mr. Smale or Mr. Canton, at 40, Leicester Square, as soon as possible.

THE Society of Apothecaries has obtained a conviction and the enforcement of a substantial penalty against an individual who had infringed the provisions of the Medical Act.

STATEMENT of operations performed at the Dental Hospital of London, Leicester Square, during December, 1889.

Extractions :

Adults	...	...	...	...	...	915
Children under 14	...	...	...	...	...	315
Under gas	...	...	...	...	...	1035

Fillings :

Gold	...	...	...	...	...	293
Plastic	...	...	...	...	...	1039
Irregularities	...	...	...	...	...	75
Miscellaneous	...	...	...	...	...	402

Total ... .. 4074

T. A. GOULD,  
V. KNOWLES,  
J. A. MALLET, } *House Surgeons.*

## 64 THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION.

STATEMENT of operations performed at the National Dental Hospital, from November 30th to December 31st, 1889.

Number of patients attended ... .. 1338

Operations :

Children under 14 ... .. 205

Extractions :

Adults ... .. 356

Under Nitrous Oxide ... .. 600

Gold Stoppings ... .. 39

Other Stoppings ... .. 206

Advice and Scaling ... .. 295

Irregularities of the teeth ... .. 57

Miscellaneous ... .. 61

Total ... .. 1819

EDGAR A. H. FIELD, }  
ARNOLD PRAGER, } *House Surgeons.*

## APPOINTMENTS.

MR. P. O'MEEHAN, L.D.S.I., has been appointed Dentist to Barrington's Hospital, Limerick.

H. FIELDEN BRIGGS, D.D.S.Mich., L.D.S., F.P.S., has been elected House Surgeon to the Liverpool Dental Hospital, *vice* Messrs. Dalby and Bates, resigned.

At a recent meeting of the Medical Committee, T. A. Gourd, L.D.S.Eng., and Vernon Knowles, L.D.S.Eng., were appointed House Surgeons to the Dental Hospital of London, and J. A. Mallett, Assistant House Surgeon. W. R. Barrett, L.D.S.Eng., has still more recently been appointed to an assistant house surgery.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

**SPECIAL NOTICE**—All communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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VOL. XI.

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**Mr. Rentoul on Special Dental Hospitals.**

THERE are few practitioners of the science and art of medicine in any of its numerous branches who take the trouble to acquaint themselves with what is going on around them but are more or less familiar with the name of Mr. Rentoul. He has been very active in urging the acceptance of a scheme the object of which is to reform the abuses of hospital out-patient departments, abuses which he regards as being so grave as to endanger the cause of public charity. The portion of the scheme which had reference to dental surgery was considered at our last annual meeting and found to require so much reconstruction and alteration that the scheme was pronounced, in its then form, unworkable. Recently, however, Mr. Rentoul has written a letter to the *Liverpool Daily Post*, which throws a new light upon his method of dealing with details.

This letter is so extravagant in its generalisations, and so obviously based upon imperfect and incorrect data that it will run a considerable risk of alienating from his scheme the sympathy of all who know anything about the working of special dental hospitals.

Mr. Rentoul, writing to the *Liverpool Daily Post* of the report of the Liverpool Dental Hospital mentions that 25,836 patients had been treated, "with the terrible total of 34,868 operations?" Why terrible? Is it possible that any person in a responsible position could permit himself to be guilty of a confusion between "operations" and "extractions"? We could not have ventured to impute such a careless blunder to anyone committing himself to print upon the subject were it not that a few lines lower down we meet with the query, "What will be the result of this great drawing of teeth?" This query, and the context in which it occurs, suggests the unwelcome suspicion that Mr. Rentoul really thought, at the moment of writing, that an operation at a special dental hospital necessarily means an extraction, but lest we should be guilty of unfairness to Mr. Rentoul, let us quote an entire paragraph from his letter for the impartial consideration of our readers:—

"Practically, Sir, there is not the slightest need for a dental hospital. If each one of the general hospitals had a dental department—as all good general hospitals have—then all the patients could be easily provided for. But a rigid and slavish specialism is killing out all chance of a man gaining a full general knowledge of the many different diseases. The Dental Hospital's expenditure is about £474 a year. Let this go to the other charities, and let them each have a large and active dental staff, so that people's teeth will not be pulled out, but preserved. What will be the result of this great drawing of teeth? Simply that another hospital must be provided for supplying arti-



ficial teeth." What is any sensible man to say to this? Dental hospitals are quoted as scenes of indiscriminate extraction as compared with dental departments such as exist in *all good general hospitals!*

The questions of special hospitals and of specialists are still matters of discussion amongst the members of the medical profession, and however sound may be the particular arguments of those who deprecate the existence of either, or of both conditions, the support accorded to special hospitals by the public and the profession shows that they have some solid grounds for their being, and when used for teaching purposes we think that they become of immense advantage to medical science and thereby also to the public. The question of specialists seems also to be solving its own difficulties, and the advanced system of teaching and the wide field now covered in the study of medicine and surgery are combining to induce the general practitioner, who is anxious for the welfare of his patient, to seek the help of one who has given his attention to some special subject and from whom he expects the results of a concentration of knowledge and experience. When dentistry became an acknowledged specialty of medicine, these questions were being fiercely disputed rather than discussed, but the most bigoted pleader for all-round excellence, on examining the necessities of dentistry in every particular, admitted that it is indeed a specialty working in a sphere which demands additional methods, both in education and in practice, from that supplied or used in general practice. It is something like shaking up dead bones to have to refer to these questions in connection with ourselves, but Mr. Rentoul's extravagant assertions have imposed this duty upon us.

We need not in the present position of matters consider

the proposed scale of fees for dentists suggested in the letter. There is only one conclusion to be arrived at by any sensible man about the whole thing, and that is that the effusion was hastily concocted without due consideration of the facts; and though this may be urged as an excuse for the crudity of a school boy's first essay, it is none when required as a defence for the lucubrations of the champion of a widely-discussed scheme. We feel sure that Mr. Rentoul has damaged his cause in the eyes of all impartial men by this wild and ill-digested style of writing, it will postpone the settlement of the question which he has so much at heart, because it will lead the profession to regard with distrust the author and promoter who can be capable of committing such amateurisms to paper.

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### **The Hyderabad Commission and the Dental Profession.**

THE discussion upon Anæsthetics which took place at the Annual General Meeting of the Association certainly marked an epoch in the history of that subject as far as the dental profession is concerned. Following upon the discussion comes the second Hyderabad Commission upon "Chloroform"; an event of the greatest importance since it may well be accepted as stating the strongest possible case for chloroform, and so, while affording the advocates of that anæsthetic a reasonable basis for their belief, at the same time it gave an opportunity for those less impressed by the safety of chloroform, to rebut evidence by evidence and criticise the deductions drawn from indisputable facts. It is, however, rather a dispassionate balancing and sifting of evidence which forms the object of the present article, and a consideration of how far the conclusions to which the Hyderabad Commission have arrived affect the dental profession and concern them in their daily practice. As is now a matter of history, Surgeon-Major Laurie, a disciple of Syme, undertook the first Hyderabad Commission, being supplied with funds through the beneficence

of the Nizam, in order to investigate experimentally the effects of chloroform upon the heart and respiration. The conclusions at which the first Hyderabad Commission arrived were practically identical with those formulated by the second Commission, viz., that the heart is not primarily paralysed if diluted chloroform vapour be employed, but stops beating after respiratory paralysis. These results were criticised in the *Lancet* and Surgeon-Major Laurie announced that the Nizam with commendable public spirit had placed in his hands necessary funds to carry out a second Hyderabad Chloroform Commission, the objects of which were to go over the work of the preceding Commission to extend and amplify. The *Lancet* undertook to name a Commissioner who would from professional repute and special knowledge be able to ensure absolute credence for the investigations. Dr. Lauder Brunton, F.R.S., undertook this work and executed a very elaborate research. Into all the details of his labours it would hardly be profitable to enter, but it may be of service to briefly describe the broad outlines of the experimental investigation before dwelling at greater length upon the points more immediately of interest to dentists. The experiments were all conducted upon the lower animals, dogs, monkeys, were mainly used; rabbits, horses, goats, &c., being also employed. Chloroform was used alone, and in succession to various alkaloidal substances, morphine, atropine, strychnine, cocaine or these in combination; it was administered upon a sponge to an animal enclosed in a box; by injections through the veins; or pumped in by a bellows through an artificial tracheal opening. The points investigated were—

1. How far methods of preparing animals influenced the results of the chloroformisation. Fasting or fed, the animals showed little variation in their behaviour under the anæsthetic.
2. How far the mode of administration influenced the result. Here, again, little variation occurred, except, and this seems to be a conclusion well worthy of the most careful note, when chloroform was slowly administered and for a long time, especially when some asphyxia was permitted, the heart stopped much sooner *subsequently* to respiratory paralysis than under ordinary conditions. The same result obtained when atropine was injected prior to chloroformisation. The animals employed were often diseased, and some were suffering from phosphorus-poisoning induced in order to bring about fatty changes, which it was thought were com-

parable to the fatty degeneration found among human beings and held to be peculiarly dangerous when chloroform was administered.

However, no particular results were found to be associated with these causes, a fact which is comparable with clinical experience since it is by no means a truism to say that those who have fatty heart die under chloroform while the robust and vigorous are not fatally affected.

The Commission undertook a series of elaborate experiments dealing with blood pressure under chloroform, ether and mixtures, under varying conditions, and carefully recorded on slow-, and quick-time cylinders the traces obtained.

1. Chloroform given with free air dilution determined a gradual fall in mean blood pressure.\* In inverse proportion to the dilution is the rapidity of fall of mean pressure. The respirations after a certain fall, grow weak and cease, subsequently the heart also stops. Even after chloroform has ceased to be inhaled blood pressure falls for a time due to absorption of the residual vapour in the lungs. After a certain time the respirations and blood pressure are incapable of being restored to their normal condition. It was further found that *struggling* and *holding of the breath* such as is induced by strong vapours, materially affects the fall in blood pressure. This result obtains not only for chloroform but all irritant vapours, e.g., ammonia, ether. Thus, if the breath is held, pressure falls, but rapidly rises again as deep gasping respirations occur. From this series of experiments we learn the danger of overdosage of chloroform, as pointed out several years back by Woodhouse Braine, that patients who voluntarily hold their breath must after a while make up for the period of apnoea by rapid and deep inspirations, and so inhale a *larger proportion* of chloroform in a given time than is safe. Struggling, independently of respiratory rhythm, heightens blood pressure by muscular contraction and pressure on the contained blood vessels, but as it is associated with rapid gasping breathing, and accelerated blood flow leads to overdosage of chloroform, and so eventually determines a lowered blood pressure. Under these circumstances the "after fall" of blood pressure is marked and prolonged. Slight

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\* . . . "the blood as it passes through the artery (or vein) exerts a lateral pressure on the sides of the artery (or vein), equal to so many millimetres of mercury." Michael Foster, p. 126. When the pressure falls below a certain point heart failure occurs.

continuous asphyxia, as from tight bands round the neck or tight clothing, simulated in the experiments by encasing female monkeys in plaster-of-Paris jackets, produced irregularity of blood pressure, weakening and irregularity of the heart's action, and led to increased intake of chloroform with its incident risks of overdosage. Complete asphyxia leads to rapid fall of blood pressure, slowing of the heart with even its stoppage for a second or so. This is said to follow stimulation of the vagi.

In dental practice a condition of this kind would arise when during an extraction the fingers of the left hand held back the tongue and so occluded the glottis. In healthy hearts the normal rhythm might recur; in feeble hearts it certainly would not do so.

The inhibiting action of the vagi whereby the heart is slowed or even stopped is considered by the Commission rather a safeguard than a danger. For, it is said, with the lessened blood flow there is a lessened chloroform supply to the tissues. On the other hand it is shown that this protective action of the vagus, if we are to accept it as a reality, is of very short duration and is rapidly followed by vagal exhaustion when the heart bounds on again, blood pressure rises and the absorption of chloroform from the lungs becomes greatly increased to the manifest danger of overdosage. This overdosage means that when a certain quantity of chloroform exists in the blood (36 m. Snow), and when conveyed to the centres in the medulla oblongata, presiding over the functions of respiration and cardiac rhythm, cause their paralysis.

The upshot of the experiments upon the vagus nerve seems to be that reflex paralysis of the heart by irritation of the vagus does not occur in dogs or monkeys, but that it is indirectly dangerous by paralysing these nerves, and so leaving the heart and lungs unguarded by vagal regulation. Whether or no this is equally true for human beings it is impossible to say, but it is highly important in this connection to remember that human beings, even if coming under the same physiological category in the matter of chloroform with the lower animals, which is exceedingly doubtful, do not benefit in any way by the statement emphatically advanced by the Hyderabad commission that reflex vagal failure of the heart is an impossibility. For example—it was formerly believed that a too strong vapour of chloroform, and *what was too strong* seemed to vary with the individual, following an idiosyncratic and not a general law, might by impinging upon the terminations of the vagi in the pharyngeal plexus or those in the mucous membrane of the lungs

produce by stimulation of these nerves a stoppage of the heart and so cause death, and sudden deaths occurring in the initial stage of chloroformisation were so explained. According to the experiments of the Commission, the procession of events would be as follows:—

The unduly strong vapours would stimulate the terminations of the vagus and blood pressure would fall the heart become slowed and respiration shallow; later, the vagi grow exhausted and as their inhibition ceases the blood pressure rises with leaps and bounds, the heart beats rapidly, respirations grow deep and are accelerated, and a greatly increased supply of chloroform is carried in the blood stream to the medullary centres, and death results. The boot is off the one foot, but unhappily fits as tightly to the other.

A further point in considering the "protective influence of the vagi" is, although it is true as contended that the action of these nerves lessens the intake of chloroform, it also *pari passu* lessens the output of vapour already in the lungs and circulating in the blood, and hence it is impossible to estimate whether an actual decreased chloroform action is so brought about.

The Commission investigated the question, within what limits will artificial respiration restore those over-chloroformed? The amount of "after fall" of blood pressure seemed to be the most important factor in this. And the "after fall" was determined, (1) by the length of time the chloroform was administered, and (2) by the accumulation in the blood, increased by asphyxial conditions, decreased by unimpeded respiration. After thirty seconds artificial respiration succeeded, failed after a lapse of sixty seconds. In isolated cases success attended it even when attempted after two minutes. In one case it was persevered in for eleven minutes before natural respiration was re-established. Morphine given with chloroform seemed to make it more difficult to re-establish natural breathing after an overdose of the anæsthetic.

Experiments were also instituted to test the effects of "shock" under chloroform. The animals were imperfectly chloroformed, and teeth were then extracted, toenails avulsed, &c. Only slight fall of blood pressure occurred, and this coupled with the experiments made in which excitation of the vagus during semi-anæsthesia produced no cardiac syncope, led the Commission to believe that shock under semi-anæsthesia does not in the lower animals bring about tendency to syncope. In this place it seems right to point out that "shock," in the surgical acceptance of the

term is not found in the lower animals ; indeed the higher the grade of intelligence the greater appears the susceptibility to shock. It would be wholly opposed to our clinical knowledge to argue from this immunity from shock found among the lower animals that human beings enjoyed a like privilege.

An attempt was made to investigate the effect of chloroform upon the fatty heart. To test this, animals were induced to take phosphorus in order to produce in them fatty degeneration of the heart. The condition resulting cannot, however, be taken as really comparable to the worn-out systems of human beings, the invariable accompaniment of fatty degeneration of the heart. And further, it must be remembered that the chiefest danger in human beings arises from heart syncope, and this condition is practically unknown among the lower animals. The effect of chloroform upon the phosphorus-poisoned animals was not materially different from that obtained in the normal condition. It may, however, be further pointed out that the same statement in a large percentage of cases holds true for man, for it is within the experience of many that persons suffering from fatty heart take chloroform very well ; unhappily, however, in man it is impossible to say whether any given case will succumb, even when the environments are the same as in all other cases.

Investigating the effect of posture upon chloroformed animals, it was found (*a*) that blood pressure fell when the upright position was assumed ; (*b*) that blood pressure in the carotid rose when the animal was placed head downwards. Operations upon animals in the vertical position did not induce shock, a statement which must be read in connection with what was stated above—namely, that “shock” is not produced in the lower animals as in man. “Inversion of the animal failed to restore an animal in the last stage of chloroform poisoning.” A conclusion at which we should have arrived *à priori*, since death in the last stage of chloroform poisoning, would be death through the lungs, and inversion would—as was pointed out some years back by Dr. Eben. Watson, of Glasgow—only add to the heart’s difficulties by bringing about an engorgement of the thoracic viscera. The cases in which Nélaton’s inversion method is of value are those of primary heart failure ; in other words, those which the Hyderabad Commission believe not to occur among the lower animals. Still the conclusions as to posture are valuable as far as they go, for they show that, other things being equal, blood pressure is least interfered

with in the horizontal position, and that the erect or semi-erect—as in a dental chair—position is one which leads to a fall of blood pressure, and so is adjuvant to heart failure.

The evidence brought forward by the second Hyderabad Commission concerning ether need not detain us long, as it has no practical import for persons who are skilled in the exhibition of this drug as given in temperate climes. Speaking at the Medical Society, Dr. Lauder Brunton said “pure ether was not to be obtained in Bombay or elsewhere in India.” The ether used for the experiments was *impure*, and was improperly given, since, if given in the ordinary way, excluding asphyxial phenomena, anæsthesia was never obtained, and so the animals were smothered. Hence results said to be due to ether were in point of fact the phenomena of asphyxia brought about by the suffocation of animals by means of ether.

The practical conclusions arrived at by the Commission, although they do not seem in all cases to be strictly deductions from the experiments, are consonant with the clinical teaching of our leading anæsthetists.

I. “The recumbent posture upon the back and absolute freedom of respiration are essential.”

Mere perfunctory loosening of clothes is insufficient, all bands about the waist must be undone and corsets taken off. In the experiments, female monkeys were encased in plaster-of-Paris jackets, and these were found to be very liable to chloroform poisoning. In the case of males, both neck and waist should be absolutely loose from constricting bands. As a rider to the above we may take III., which, besides reiterating directions about loosening the clothes, insists upon no pressure upon the thorax or abdomen of the patient being exerted by assistants during their efforts to restrain his struggles.

II. “If during an operation the recumbent position on the back cannot from any cause be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration the patient should be at once restored to the recumbent position on the back.”

IV.—(VIII.) “As a rule no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chance of death from surgical shock or fright.”

This important rule is more in keeping with clinical obser-



ration than with the teaching of the experiments, for it is distinctly stated that surgical shock is in no wise a danger in partial anaesthesia by chloroform.

The patient is said to be ready for operation (VII.) when unconscious winking ceases.

V.—(IX.) "The administrator should be guided as to the effect entirely by the respiration. His only object while producing anaesthesia is to see that the respiration is not interfered with."

Although not clearly expressed this rule would seem to mean that the sole business of the chloroformist is to watch respiration. This, as there will be occasion to point out later on, is not warranted by such premises as are afforded by the experiments made upon the lower animals and is decidedly dangerous, unless supplemented by an injunction to be at least as careful in watching the pulse and pupil.

VI.—(X.) Enjoins that the chest and abdomen should be bared during an administration in order that the movements of respiration remain visible to the administrator throughout the administration. "If anything interferes with the respiration in any way however slightly, even if this occurs at the commencement of the inhalation, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again."

In the succeeding sections directions are given as to the best means of resuscitation of those suffering from an overdose of chloroform, but as these are in no sense new, we may briefly sum them; elevation of the hyoid bone, by moving forward and upwards of the inferior maxilla, and if this manoeuvre fails, drawing forward the tongue with forceps and the performance of artificial respiration by Howard's method.

The value of the conclusions at which the Hyderabad Commission arrived must be tested by our experience—

- (i.) Of the lower animals under chloroform ;
- (ii.) Of man under chloroform.

Under the first head it must be admitted that even varieties of animals show remarkable differences with respect to chloroform, dogs, for example, being peculiarly susceptible to overdosage and death by failure of respiration. Monkeys are, the report shows, affected differently again, a comparatively small dose producing a condition of semi-anaesthesia not found in other creatures. The fact that primary syncope is not recorded as occurring among the

five hundred or so animals experimented upon must be considered in connection with the following :—

(a) Primary syncope in human beings is comparatively rare. Of the deaths under chloroform a large percentage are undoubtedly from respiratory paralysis and from this point of view may, perhaps, be termed preventible, so that death in the first stage of chloroform when due to heart failure would occur, perhaps, not more often than once in five or six thousand administrations, if so often.

(b) The lower animals are, as has been shown alike by former experimenters and by the Commission, not easily, if at all, affected by "shock," and further their circulatory system is not affected in the same way as is the case with man, so that fainting, a common occurrence among humans, if existent at all is very rare in the lower animals. A long experience in laboratory work also shows that a great variation exists among the animals themselves in their reaction to chloroform, and hence it is not always safe to generalise from experiments conducted with one kind to others of different varieties.

(c) The almost universal experience of those most accustomed to administer chloroform to human beings in temperate climates is that they may die in the early stages of chloroform administration, the heart stopping before or with respiration, and in such cases the most prompt attention to artificial respiration, inversion, &c., seldom, if ever, averts a fatality. And secondly, that in the later stages there is always a danger lest through interference with respiration, that function ceases and subsequently the heart stops. These cases usually recover when artificial respiration is promptly and efficiently performed. Whatever may be the mechanism in man whereby primary heart failure occurs, the clinical fact that it does take place remains, and warns against trusting only to the character of respiration as an index of danger.

The whole discussion may be summed up as follows : the researches of the Hyderabad Commission show that in the lower animals chloroform kills through the failure of respiration ; it is an assumption unsupported by positive evidence or clinical observation that this reasoning can be applied to human beings. Further, clinical observation negatives the assumption. Unless direct proof were producible, and there is none, a chloroformist would be wholly unjustified in neglecting the pulse, and, since death may occur, it is generally believed from clinical evidence, through the hearts or through the lungs, it is necessary to watch pulse and

respiration alike, and further, since the pupil may give valuable information as to "shock" it is therefore advisable to keep that also under observation. An important point to which the Commission have not drawn attention is to test respiration by the blast of air leaving the nostrils and mouth, *not* trusting to ocular observations of chest and abdominal movements, since these may continue even when little or no air is entering the lungs.

The concluding paragraph—"The Commission has no doubt whatever that if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety so as to do good without the risk of evil"—cannot be accepted, since, as has been pointed out above, the Commission has failed to substantiate its contention that in man heart failure from chloroform is non-existent.

For dental purposes the important points may be summarised : chloroform has not been shown to be one whit less dangerous than heretofore, and certainly is more so than nitrous oxide or ether if properly administered ; that when chloroform is given for dental purposes the patient should be in night dress, in the recumbent position, and complete anæsthesia should be attained before any operative procedure be undertaken.

That in view of the ever-present danger of syncope from interference with respiration by forcing back of the tongue, &c., a skilled chloroformist should always be present, and should give his undivided attention to the administration.

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## ASSOCIATION INTELLIGENCE.

### Irish Branch.

THE general meeting of the Irish Branch was held on Thursday afternoon, January 30th, at four o'clock, in the Royal College of Surgeons in Ireland, St. Stephen's Green, Dublin, for the election of the President, Vice-President, Hon. Treasurer, Hon. Secretary, and Council for 1890.

The chair was taken by R. H. Moore, F.R.C.S.I., President. The minutes having been read and confirmed, the ballot was declared open. It was decided to have the Treasurer's statement of accounts adopted at the next branch meeting, as one of the auditors had forgotten to look over the accounts with the Hon. Treasurer.

Dr. STACK asked permission to postpone the consideration of his notice of motion with respect to an amendment of the rules till the next meeting, as the specified time of notice had not expired.

Mr. HERBERT WILSON (Londonderry) proposed, and Mr. QUINN seconded, "That in future the Irish Branch shall hold three meetings in the year." The motion having been put, was declared carried.

Mr. J. S. THOMSON proposed, and Mr. HERBERT WILLIAMS seconded, "That the meetings shall in future be held in the evening on Tuesdays or Thursdays." The resolution having been put, was unanimously adopted.

Mr. W. BOOTH PEARSALL proposed, and Mr. HERBERT WILLIAMS seconded, "That all future meetings of the Branch be held in Dublin as the most central and convenient place in which to make the meetings of the Branch interesting and useful to the members." The resolution having been put by the Chairman was carried unanimously.

The result of the ballot was announced as follows : President, J. C. Clarke, L.D.S.Belfast ; Vice-President, W. Booth Pearsall, F.R.C.S.I. ; Hon. Treasurer, A. F. Thomson ; Hon. Sec., W. Booth Pearsall, F.R.C.S.I. ; Members of Council—J. J. Andrew W. H. Elwood, J. McStay (Belfast), W. C. Corbett (Cork), A. W. W. Baker, D. Corbett, sen., D. Corbett, jun., R. H. Moore, G. M. P. Murray, F. Ryding, C. Wall (Dublin), P. O'Meehan (Limerick), Herbert Williams (Londonderry).

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### West of Scotland Branch.

THE next meeting of the West of Scotland Branch will be held on Thursday, February 27th, at 8 p.m., in the Library of the Faculty of Physicians and Surgeons, St. Vincent Street, Glasgow, when Mr. Oswald Fergus, L.D.S.Glas., will read a paper on "The Care of the First Permanent Molar."

Casual communications are invited.

REES PRICE, L.D.S.Eng., *Hon. Sec.*

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### Midland Branch.

THE annual meeting of the above will be held at Derby early in May. Members who have communications or matters of interest to bring forward are requested to inform the Secretary as early as possible.

I. RENSHAW,

*Drake Street, Rochdale.*

*Hon. Sec., pro tem.*

#### VISIT OF THE MIDLAND COUNTIES BRANCH TO WARRINGTON.

The Midland Counties Branch of the British Dental Association paid a visit to Warrington on Saturday afternoon, Feb. 1st. The members began to arrive about three o'clock, and were received in the Art Gallery by Mr. John Taylor and Mr. Thomas Fletcher. Shortly afterwards a Council meeting was held at Mr. Fletcher's residence in Museum Street, and several of the members took advantage of their visit to Warrington to make an inspection of that gentleman's works, which afforded them not only instruction but pleasure. Re-assembling in the Art Gallery, a short time was spent in an inspection of the pictures on the walls, and when the members of the Council arrived all sat down to an excellent knife and fork tea in the Museum lecture room, the caterer being Mr. Chantry, of Sankey Street and Horsemarket Street. The tables were most tastefully adorned with fairy lamps and flowers. For a short time before and during tea Mr. R. H. Pearson's band discoursed some excellent music, so that it will be seen the arrangements, which had been made by Messrs. Taylor and Fletcher, were of the most complete character, and many of the members of the branch expressed themselves thoroughly pleased with their visit to Warrington. The following gentlemen were present:—H. C. Quinby, President (Liverpool); G. Brunton, President-elect (Leeds); Messrs. J. H. Jones (Ashton-on-Mersey), T. Mansell, William Shillinglaw (Birkenhead), F. E. Garner, A. Howarth, E. J. Ladmore (Bradford), W. Broughton (Eccles), Arthur Cocker (Halifax), J. S. Crapper (Hanley), Thomas Buckley (Hollinwood), Charles Rippon, J. W. Senior (Huddersfield), T. M. Howkins, J. C. Storey (Hull), J. C. Birch (Leeds), R. A. Councill, T. Dilcock, R. Edwards, F. Gaskell, W. Ladyman, W. Mapplebeck (Liverpool), L. Matheson (London), H. Campion, G. G. Campion, W. Dykes, W. Headridge, E. Houghton, W. Kelly, P. Linnell, Henry Planck, G. N. Skipp, George Whittaker, E. H. Williams (Manchester), George Broughton (Patricroft), I. Renshaw

(Rochdale), Joseph Harrison, F. Harrison, J. Lee Pike (Sheffield), W. H. Harding (Shrewsbury), Alfred Cocker (Sowerby Bridge), Sidney Wormald (Stockport), Prosper Ladmore (Southport).

#### VISITORS.

Messrs. J. A. Biggs (Glasgow), C. Dopson, F. R. Guyler, C. Planck (Liverpool), J. C. Stokoe (Manchester), Thos. Fletcher, J. C. Young (Warrington).

#### THE BENEVOLENT FUND.

After tea the President said the members desired to thank Mr. Fletcher and Mr. Taylor for the kind manner in which they had entertained them that day. At the suggestion of the Hon. Secretary of the Benevolent Fund, it was proposed to pass the box round, as at all convivial meetings like the present, and they could not better please their kind hosts than to put into the box what it would have cost them if they had had to pay for the tea themselves. A letter had been placed in his hands from Mr. Alex. Abel, of Harrogate, who regretted he was unable to be present, but he had sent a cheque for half a guinea to be placed in the box. The President announced that the amount received in aid of the Benevolent Fund was £6 5s. 6d., and shortly afterwards that had been increased to £6 10s. by the kindness of Mr. Fletcher. This with Mr. Abel's cheque amounted to £7 os. 6d.

#### THE BUSINESS MEETING.

The business meeting, which was held in the Lecture Room subsequently, was well attended. Mr. H. C. Quinby (President) was in the chair, and all those named above were in attendance.

#### THE CIRCULAR.

The President said part of the work of the Council since the last meeting had been to draw up and issue a circular, the intention of which was to inform the general public of the object and aims of scientific dentistry. A copy of this circular would be placed in the hands of every member in a few days.

#### THE RESIGNATION OF MR. WAITE.

The President said since their last meeting at Halifax their late honorary secretary had felt himself compelled to send in his resignation, and they had most reluctantly accepted it. At their last meeting Mr. Waite intimated that his resignation was an event for which they must look in the near future, but they all had hoped

that the event might even then be long deferred ; for they knew how deep their obligations were to him for their existence as a working and not unimportant branch of the British Dental Association. They all felt that his resignation, when it did come, would leave a vacancy which it would be difficult to fill. But rapidly increasing infirmity made it seem to him imperative that he should resign his secretarial duties at the earliest opportunity. So at a meeting of the Council held in Manchester on the 23rd of November, Mr. Waite's resignation was tendered and accepted. He had just said he thought they knew their obligations to their late hon. sec., but he had fought many battles for them, and by his energy and perseverance, always animated by his sincere desire for the good of their profession, he had won for them many victories which few of their members knew of further than that a certain good result was at length attained. Others, however, could speak of these things more eloquently than he (the President) could. But it was necessary for them to think of what Mr. Waite's resignation meant to them. Accustomed to have all things go smoothly at their meetings, they depended upon the skill and ability of their pilot to guide their course. But the time had come when they found he could no longer be their pilot, and his mantle was transferred to the shoulders of one who, above all others, he would have preferred to see wearing it. He referred to Mr. Renshaw, their hon. sec., *pro tem.*, whose election he most earnestly hoped would be unanimously confirmed at the next annual meeting, as Mr. Renshaw had throughout the existence of the Association been the active friend, and more recently the confidential assistant of their late respected hon. sec. Mr. Renshaw had never failed to attend a meeting of their branch, and had attended every Council meeting since its formation in 1880; therefore he knew all the workings of their organisation. Mr. Renshaw had taken an active part in all their battles with quackery and imposture. The duties of the office were becoming increasingly important, and involved a great deal of labour and expense. Mr. Waite estimated the travelling expenses alone at about £28 per annum. Was it fair that the secretary should be their coffer from which to draw working expenses? No, that must not be so. Their secretary could not take the position of a salaried official. He did his work voluntarily; but it was their duty to see that he had a fund upon which to draw for the necessary expenses attending the work. Their

finances at their present limit would not go far to meet that, and all the other demands upon them, and in that case it was their duty to increase the subscriptions. They were an important society now, and they ought not to begrudge a double subscription when money is actually needed for working expenses.

The Honorary Secretary gave a few particulars with respect to the next annual meeting. He said it had been decided to hold the annual meeting of this Branch at Derby on either the 9th or 16th of May next. It was expected that they would have a first-class gathering, not only from the characters of the papers to be read, but in other respects also. There would be excursions to the neighbouring country, to Chatsworth, Haddon Hall, and other spots, and arrangements were being made for ladies wishing to accompany their husbands. Fuller particulars would be announced further on. The arrangements were at present in a preliminary stage.

Mr. T. Maudsley Howkins then read a paper on Pivot Teeth, which will be found at another page.

Mr. Fletcher then delivered a lecture on Coal Gas, which will appear in our March issue.

After an interesting discussion of the papers the proceedings terminated.

Three members were elected to the British Dental Association ; seven members were elected to the Branch.

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## ORIGINAL COMMUNICATIONS.

### The Requirements for the L.D.S.E.

BY F. NEWLAND-PEDLEY, F.R.C.S., L.D.S.

DENTAL SURGEON AND LECTURER ON DENTAL SURGERY GUY'S HOSPITAL.

THE recent alterations in the curriculum tend in the right direction by placing the dental students on a more even footing with their medical confrères, but there still remain one or two glaring defects in the course of study which could very easily be removed. To state the case plainly, I would urge the abolition of the second courses of lectures on Dental Surgery, Dental Anatomy, and Dental Mechanics, and the substitution of a course of lectures on Operative Dental Surgery and a series of demonstrations on Dental Microscopy.



The Royal College of Surgeons have wisely decreed that dental students shall henceforth attend Practical Physiology, but it is quite as necessary that they should receive instruction on the microscopic appearances of teeth and their surrounding tissues in health and in disease.

Students are obliged to attend two courses of lectures on Dental Surgery, but in my experience Operative Dental Surgery cannot be profitably included in even a long course of lectures on Dental Surgery. Nor is this deficiency quite supplied by a daily clinical demonstration given by one of the teachers in the school. What is needed is systematic teaching on the subject, which would prevent students from getting into a mechanical style of operating, and would assist them in mastering the scientific facts by which their manipulation should be guided.

The proposal to add additional courses of lectures to the dental curriculum will probably be met with the question whether we shall not be sacrificing the student's practical work to book learning. If the second courses of special lectures were abolished there would not only be ample space provided for the new lectures, but there would also be considerable time set free for other work. For example, at Guy's Hospital the lectures on Dental Surgery and on Dental Anatomy are each twenty-four in number, and the lectures on Dental Mechanics number twelve; in all sixty special lectures. Clearly, if these were got rid of, there would be room for two new courses. One feels impelled to ask what object there is in making students attend the same course of lectures in consecutive years. The principle of enforced attendance on lectures twice over belongs to the past, and has been condemned as wrong in theory and a failure in result. With the one exception of a double course of anatomy lectures for the F.R.C.S., the Royal College of Surgeons of England no longer requires two courses of the same lectures from any students save dental. There is another aspect in which the matter may be placed scarcely devoid of humour. The standard course of Dental Anatomy and Dental Surgery lectures at the largest dental school in London is twelve in number, which is just half the number given at Guy's Hospital, so that one may be allowed to ask if a single course at Guy's Hospital would be accepted as equivalent to the double course elsewhere.

The urgent need of teaching on Dental Microscopy has led us to institute a series of demonstrations which will be given annually,

and it is now proposed to found a lectureship on Operative Dental Surgery. I trust that the time of second years' men will be set free in the manner I have indicated, in order that it may be available for very necessary study.

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### Severe Orbital Neuralgia, a Sequela of Epidemic Influenza.

BY WM. A. MAGGS, L.R.C.P., M.R.C.S., L.D.S.ENG.,

SENIOR ASSISTANT DENTAL SURGEON, AND LECTURER ON DENTAL ANATOMY  
AT GUY'S HOSPITAL.

It is generally recognised that the central nervous system has been primarily involved in the recent pandemic of influenza. The intense frontal headache, pain in the eyes, with occasional diplopia, insomnia, complete loss of taste and smell, vomiting, and severe pain in the lower dorsal, lumbar, and sacral regions, all point in this direction.

Then, again, there is the utter prostration, which is out of all proportion to the general symptoms, and which persists for days, or even weeks, after the attack has subsided.

In some of the fatal cases, retention of urine, with absence of patellar reflexes have occurred, and later on complete paraplegia; whilst in others tingling of the toes and hands preceded general paralysis, which ended in death from exhaustion. The above are amongst the most general nervous symptoms, and some of them are always present in all true cases of influenza, whether the pulmonary or the gastro-intestinal tracts mostly suffer.

Several cases of severe neuralgia of the fifth nerve have lately come under my care, and I will briefly give the details, merely stating that I made out in all of them a history of a recent attack of influenza.

*Age, Sex and Course.*—It generally occurs in young adult life—twenty to thirty years—and in the male sex. Its course extends over seven to ten days.

*General and Local Conditions.*—Pulse and temperature normal. Patient complains of intense periodic neuralgic pain, occurring daily at about ten or eleven o'clock. It is always unilateral, and confined to the parts supplied by the supra-orbital and infra-orbital nerves, and the temporal branches of the auriculo-temporal nerve. It is attended with slight ophthalmia, swelling of the eye-ball and eyelid, together with epiphora. The pain continues for

three or four hours, and then gradually subsides, leaving the eye swollen and tender.

*Treatment.*—Counter-irritation, by means of “Emplastrum Lyttæ” behind the ear, affords relief, and causes the pain to be less intense and more generalised. Antipyrin, ten or fifteen grains, at the onset of the attack diminishes the severity, and shortens the duration of the pain. Quinine and Croton Chloral are not successful, and the former drug had been taken previously by some of the patients to no purpose. Local anodynes, such as Aconite, are useful.

*Remarks.*—The chief points of interest are—*The small area of nerves involved, its unilateral character, its periodicity and intensity.* I may mention that one or two of the patients were disappointed at hearing that the neuralgia was not of dental origin, but they have since acknowledged the accuracy of the diagnosis.

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### **New Method of Administering Nitrous Oxide and A. C. E. Mixture.\***

By WILLIAM J. STEPHENS, L.R.C.P.

THE apparatus used for this method of administration consists of an inhaler, a receptacle for the A. C. E. mixture, and a stopcock on the principle of that used by Mr. F. Hewitt, M.A., M.D.Cantab.

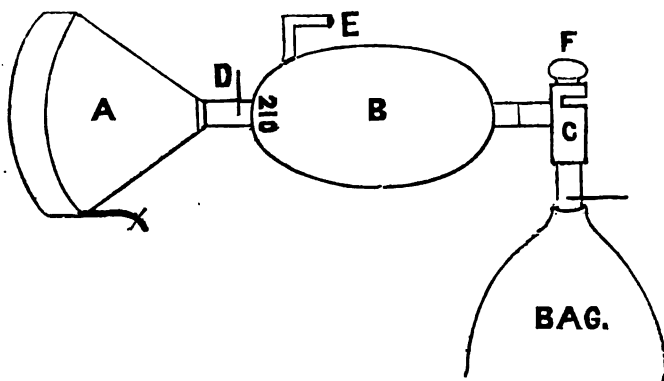
To use the apparatus it is necessary to turn the tap D to the point marked o on the bulb, thus allowing the patient to breathe gas alone. The gas is passed into the bag from a bottle worked by the foot, leaving both hands free for manipulating the apparatus, &c.

On placing the inhaler over the face of the patient gas alone is given, keeping the bag well filled with gas. After about the fifth or sixth respiration, the tap marked D is slowly brought upwards, and as this is done the gas entering from the stopcock passes over the mixture, and as the tap is turned further the whole of the gas passes over the mixture and carries a certain portion of the vapour into the lungs. When the patient is two-thirds under the influence of the anæsthetic the gas may be turned off, and the tap marked F in the stopcock turned so that the patient breathes the same gas

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\* Notes read before the Brighton Dental Society, by the Hon. Sec. (Mr. D. E. Canish, L.D.S.), as supplied by Mr. William J. Stephens, L.R.C.P., Anæsthetist to the Brighton Dental Hospital.

over again, this being charged with the vapour from the mixture, whilst the moisture that comes from the lungs is largely retained in the receptacle owing to the affinity of the mixture for moisture. The mixture takes slightly longer to anæsthetise the patient than gas alone, and the advantages are :



A inhaler, B apparatus for A. C. E. mixture, C stopcock, D tap to regulate supply of mixture passing in with the gas, E funnel for charging B, F tap to allow gas to be re-breathed.

1st. The patient is about as long again under the influence of the mixture as when gas alone is used, enabling the operator to extract from four to nine teeth with one administration.

2nd. Though the recovery is longer than when gas alone is used, there is no sickness or unpleasant symptoms as when ether is used in this way.

3rd. The pulse is slightly increased during the anæsthesia, as when gas alone is given.

4th. The vapour is neither so irritating or pungent as ether.

I have been present on several occasions when Mr. Stephens has been administering the gas and mixture, and have certainly been enabled to extract more teeth than I could have done had gas alone been administered; having removed nine at one sitting, and several times seven. Mr. Stephens has promised to bring this before the Society in the form of a paper after he has collected a little more data.

## Some Improvements in Tubes and Pins for Pivot Teeth.\*

By T. MAUDSLEY HOWKINS, L.D.S.

In placing before your notice this evening some improvements in tubes and pins for pivot teeth, or more commonly called artificial crowns, permit me first to make a few general remarks upon the subject of crowning; not that I in any way pretend it to be a subject that every dentist is not more or less familiar with, still it is a branch of dental surgery that is liable to be neglected or overlooked, and in numerous cases where two, three, or even more crowns might be placed on roots both in front and back of the mouth to the advantage of the patient, plates are used with attachments of thin wire or plate bands to other teeth, to *their* injury and the discomfort of the wearer.

I consider crowning is one of the most interesting and delicate of operations we have to perform and one that repays us the most for our time and trouble. Notwithstanding this we often see crowns that have been put on roots in such a manner or with so much undue haste that its value is entirely lost; the crown stands away from the root showing an ugly black line, or it becomes loose, rotates and moves about to the annoyance of the wearer, or inflammation is set up, and finally the loss of the root.

There are probably some forty or fifty methods of crowning in use, and in each one there is some objectionable feature or features, the reason being the great difficulty in combining all the desirable qualities, which I think are these:—

1. The strength of attachment of crown to the root must be such as to stand the wear and tear of a natural tooth.
2. Must be so placed as to prevent all movement, either rotary or otherwise.
3. That the pin may be easily removed if it becomes necessary.
4. Preservation of root from decay.

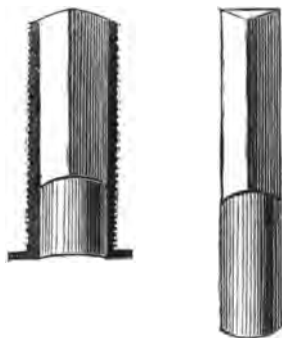
The only method that can claim these four essential qualities I would submit is "Balkwill's;" but although this method is most successful in single cases, it is found that when placing two or more crowns on adjoining roots they become twisted and unsightly, unless made in the form of a bridge, which I think

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\* Read at the meeting of the Midland Counties Branch held at Warrington, February 1, 1890.

undesirable, unless absolutely necessary, for this reason, that if anything happens to one of the roots or crowns the whole bridge must be removed. It is in the endeavour to prevent these failures that I wish to bring before your notice an improvement in the pins and tubes of Balkwill's method.

It was suggested to me that if the pins were only square, triangular, or, in fact, any shape but round, we should be able to overcome the rotating difficulty. Then I found it would be necessary to have the tubes larger than those now in use, and so necessitate the cutting away of good root, to its disadvantage. The square specimens which you have before you are made by Messrs. Ash and Sons for Mr. Bowman Macleod, of Edinburgh ; and I think their great bulk is detrimental to their value. Messrs. Ash have also made for me some tubes, the bores of which are three-quarters triangular and a quarter round, with split pins to fit. I think it is obvious to all that here you have a pin which has the same strength as a round pin, with the advantage of a triangular one, and the using of it is in no way altered.



The following is a brief outline of the method in which I use these tubes and pins, which is the same for all teeth, including bicuspid. Being perfectly satisfied that the root is in a thoroughly healthy condition to receive a crown I proceed to prepare it ; if there is much crown standing I clip off small pieces with an enamel chisel or pair of cutting forceps, and finish with "Ottolengui" root-facers, until the root is underneath the gum-edge all round. I think this better than taking a wholesale cut at the crown, as the tooth so often fractures in the wrong place,

notwithstanding the precautions that may be taken to prevent this. I now ascertain the depth and direction of the root by means of a thin brooch thrust through a piece of card. On finding this, I measure off the length on the drill, to prevent drilling too far ; place a small pellet of cotton wool pressed up to the apex of the root. Next drill open the root as far as necessary with engine-drill provided. (These cause very little pain, whereas the hand-drills are both painful to patient and annoying to operator.) The screw having been cut in hole by means of the two taps, the orifice must be countersunk with burr provided, so as to receive the shoulder of the tube, which, when screwed in, should come flush with surface of root.

Having cut the tube the right length and found it fit perfectly, fix it permanently in its place by smearing the outside of tube and the inside of root with Sullivan's soft amalgam ; but in order to prevent the screw from clearing all the amalgam before it, it is best to file away a little of the thread at the extreme end of the tube : screw the tube home and withdraw the small pellet of cotton wool from the apex of root, which will bring any surplus amalgam that may have found its way into the tube.

The tube secure, place the pin in the tube. Now take a piece of twenty carat gold, No. 3, or very thin soft platinum, a little larger than the root with a hole punched in the centre ; place this cap on the root with the pin through the hole, burnish to the root, then withdraw them both and solder together. Cut the upper part of the pin to about one-eighth of an inch off the plate, leaving only sufficient to take hold of in removing pin from tube. Again insert the pin and cap, and repeat the burnishing until every point fits the root ; when in position, take an impression either in composition or plaster. Next remove the pin and cap and place them in the imprint made in the impression, obtain a bite in the usual way. The next process is done in the workroom. On obtaining the model, grind a porcelain flat tooth to fit cap and gum on labial border, then back it, place tooth in position, withdraw crown, cap and pin and invest in plaster and sand ; now solder and contour the back as much like a natural tooth as possible. If these details are followed closely the crown can be placed in position in the mouth and will not require any further fitting or alteration ; and you will have a crown of a natural appearance, which has the strength of a natural tooth, will not rotate, and may be easily removed if necessary ; and the root is so covered as to prevent any decay going on.

In conclusion, gentlemen, I trust that this little alteration in the Balkwill pivot will render this most admirable invention of still further value.

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## LEGAL INTELLIGENCE.

### Brighton County Court.

His Honour Judge Martineau held an ordinary sitting at the Court House, Church Street, Brighton, on Friday, and disposed of the following cases :—

#### ACTION BY A DENTIST.—WOOD V. FAUBELL.

The plaintiff, Mr. W. R. Wood, a dentist, of 53, Norfolk Square, Brighton, sued the Rev. F. Faubell, of Wakeland House, Henfield, for £15 15s., for teeth supplied to the defendant's wife.

Mr. Haycraft, instructed by Mr. Trevor Pollard, appeared for the plaintiff, and Mr. J. K. Nye for the defendant.

The plaintiff stated that at the end of June Mrs. Faubell came to him with a lady friend and asked him what the cost of filling her mouth with teeth would be. He told her, and later on he took a model, and the cases were duly made and fitted. The lady appeared satisfied with the teeth. When the lady first came he fancied he might have told her off-hand that she required fifteen teeth. The teeth were taken away on the 12th of July and on the 23rd she returned, said the teeth did not fit, as they dropped, and that he had put in thirteen teeth instead of fifteen. She did not stipulate for any special number of teeth, and when making cases of teeth like those it was not usual to do so. When she called on the 23rd he left the surgery to fetch the models from the workroom, and on his return in about a minute the lady had gone and had left the teeth behind. Frequently cases would not adjust themselves comfortably for the mouth immediately they were put in, but the close fitting was only a question of a very short time. The plates were fixed by suction, and it required the patient's assistance for a time to ensure this. After the lady left the teeth behind on the 23rd he sent them to her by post, and she sent them back again.

Cross-examined : He would swear he was not angry when Mrs. Faubell came to him on the 23rd, and did not refuse to have anything more to do with the teeth. He simply told her he would



fetch the models and show her, but she had gone before he returned to the surgery. He did not believe she came back on the 12th of July, two or three hours after she took the teeth away in her mouth, and stated that she could not wear them, as they pained her so much. He did not remember more than one interview that day. When the lady returned on the 23rd she gave him no opportunity of seeing what alterations were required. Had she done this there would have been no difficulty in making them fit. After the action was brought Mrs. Faubell called on him with a friend, and an inquiry was then made if he would construct another set of teeth for her. He refused to do this until he had had an opportunity of making the first set fit. The day before the case was set down for hearing she again called and asked if he would alter them. At that time he of course refused to touch them again.

Mr. Crooksey, surgeon dentist, of Worthing, now fitted the cases of teeth in the mouth of Mrs. Faubell, in the robing-room of the Court, and on being sworn stated that he had no reason to doubt the models were true, and the cases fitted them exactly. The cases did not fit now, as it was plain that the mouth had altered. A stump had dropped, and this would prevent the proper suction. He had no doubt that the teeth when supplied fitted exactly.

Mr. Wood, re-called, said there were now seventeen teeth in the cases, he having added two after Mrs. Faubell complained that the number was short. He denied that he was in a temper when the lady brought the teeth back.

This completed the case for the plaintiff.

Mrs. Faubell, on being sworn, stated that in July last she was anxious to have a set of teeth, as she suffered much from indigestion. He said the lowest sum he could do a set of teeth to fill the gaps with would be £15 15s. She had the models taken, and on July 12th she had the cases placed in her mouth, and she went away to have some refreshments, but she found they hurt her so much that she came back and had them refitted. Mr. Wood made a few slight alterations, and pushing the cases in her mouth said they now fitted so well that she could go to India with them. She wore them for some days after, but they hurt her so much that she could not eat, and her health was affected. They also kept falling whenever she opened her mouth. She called again on the 23rd, and told plaintiff how badly they fitted,

and asked that the defects might be remedied, and he then told her that it all came of not having ready money, and that he would have nothing more to do with them. He then left the room, and as he did not come back immediately she left the room, leaving the teeth there. Mr. Wood returned the teeth to her on the 14th September, and on the 10th she wrote to Mr. Wood, saying that in consequence of his behaviour at the last interview she did not think that he was going to do anything more with the teeth, and returned them.

Cross-examined: She thought fifteen guineas was rather high, but Mr. Wood would not supply the teeth for less. She wore the cases so long that they made the muscles of her mouth quite sore and tender. When she called on July 23rd she was desirous of having the teeth properly fitted, but Mr. Wood acted in such a repulsive manner that she did not care to call again. Acting under the advice of Mrs. Charlesly, she went to plaintiff and asked him for both their sakes to alter the cases, and settle the matter before it came before the Court.

His Honour said he could not reconcile the statements about the interview of July 23rd, but he would say no more about it, but give a verdict for plaintiff with costs.

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### Claim by a Newcastle Dentist.

Yesterday, at the Newcastle County Court, before His Honour Judge Seymour, Q.C., LL.D., Mr. Markham, L.D.S.I., dentist, of Eldon Square, Newcastle, sued Mrs. Farlam, of North Shields, for £15, for professional services rendered to her daughter.

Mr. Dix appeared for the plaintiff, and Mr. Whitehorn, of North Shields, for the defendant.

Plaintiff said that on February 15th last year, Miss Farlam came to him for the purpose of having her teeth attended to. He extracted several of her teeth at subsequent visits, and filled several with gold stopping.

Cross-examined: Miss Farlam asked him to examine her mouth. He knew, when he examined her mouth, that the total cost would approach somewhere about £15 or £20. He did not tell the young lady what the cost would be; she did not ask it.

In answer to Mr. Dix, plaintiff said that Miss Farlam told him

that some young lady friends had recommended her to him. At the time she came he did not know whether she had a father or a mother. He was not in the habit of inquiring when patients came to consult him who was to be responsible for the payment. After the account was rendered, Mrs. Farlam's son came to him, and said his mother objected to the fees as being excessive, and he (plaintiff) said he was willing that the charges should be submitted to a competent dentist, by whose decision he would abide.

Mr. Whitehorn, for the defence, submitted that the mother was not liable for the defendant. Miss Farlam had something the matter with her teeth, and was recommended by some young lady friends to go to Mr. Markham for the purpose of having a tooth extracted. That was first of all done, and then the examination of the mouth took place. Mrs. Farlam would tell His Honour that that was all she authorised her daughter to do. The charge for that was 5s., and that had been paid into Court. The daughter returned, and did not say a word to her mother in regard to anything else that had to be done, and, although it turned out that the daughter had gone three or four times subsequently, the mother was prepared to say that she knew nothing at all about it, and that if she had known that her daughter was incurring such a charge, she certainly would not have authorised it, because her means were limited, she being a widow, and she was not prepared to go to such an outlay.

Mrs. Farlam stated in evidence that she believed that all her daughter had done was to have a tooth extracted, and she did not authorise her daughter to have anything else done to her mouth.

The defendant's son gave evidence as to an interview between him and Mr. Markham.

His Honour, in giving judgment, pointed out that the son, in his interview with Mr. Markham, never told him that his mother repudiated the liability. She objected that the charge was excessive. The son said, "My mother does not hold herself responsible for the amount," not "for the account." He also said the daughter "was not authorised to go to that expense," not that she was not authorised to incur the debt. The correspondence between the mother and Mr. Markham also showed that Mrs. Farlam did not repudiate her responsibility. His Honour commented on the fact that the daughter had not been called. If she had been called she would have proved that she was told

that the stopping of her teeth with gold was an expensive operation. He gave judgment for the plaintiff for the full amount claimed, with costs.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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### Odontological Society of Great Britain.

THE ordinary monthly meeting of the above Society was held at its rooms, 40, Leicester Square, Mr. FELIX WEISS, President, in the chair. Present: a fair attendance of members and several visitors, amongst whom was Mr. Pearce Gould.

After reading and confirmation of the minutes, the PRESIDENT called upon the Librarian and Curator for their reports. The latter, presented and described sections of the skull of a collared peccary showing milk teeth *in situ*, with the permanent first molars and the tips of the permanent canines. The alveolus was cut away so as to show the roots of the teeth which were already erupted and the crypts of those already in course of development.

Mr. WILLIAM HERN then read the notes of a case of buried molar in the lower jaw. The patient, a woman aged thirty-eight, applied at the Dental Hospital early in 1888 complaining of a small swelling on the lower part of the right cheek. This swelling she described as at times increasing. There was also neuralgic pain and stiffness on the same side. The swelling was found to be on the lower border of the body of the lower maxilla on the right side, midway between the symphysis and angles. The skin moved freely over it, but it seemed bound down to the jaw. The alveolar border on the same side seemed thick. There were two molars on that side, the anterior leaning towards the second bicuspid. The patient failed to remember whether a tooth had been extracted on that side. The teeth on this side of the lower jaw were free from caries. The second bicuspid was, however, darkened, slightly loose and tender to percussion. In removing this tooth the house surgeon fractured it. Subsequent attempts to remove the fragment under gas failed. Six months subsequently a sinus had formed in the position of the swelling. Mr. Hern, upon examination of the jaw in the position of the fragment with a probe, found in the posterior and deeper part of the socket what gave a sound like enamel. The socket was plugged with lint, and subsequently further dilated when freer manipulation became possible. Enamel was again struck, and the cusps and depressions were mapped out. The patient was seen again in November, and the socket packed with gum sandarach on alternate days. This so dilated the socket as to enable the crown of a buried tooth to become

quite visible. The second molar having no antagonist, it was decided to remove it, in the hope that the buried molar might rise up. In February, 1889, there was no change, and the discharge from and appearance of the sinus prejudiced the patient in her avocations. Mr. Hern, therefore, had her anaesthetised, and attempted to remove the tooth with an elevator. The tooth could not be removed, as it was feared the weakened jaw would hardly stand much force. It was then decided to submit the patient to a surgical operation, with a view of cutting away a portion of the jaw. Mr. Pearce Gould, F.R.C.S., accordingly admitted the patient into the Middlesex Hospital. Under chloroform the outer wall of the alveolus was cut away by the use of a dental engine, and the tooth lifted out of its bony bed. The discharge at once ceased, the sinus closing; and on the following day the patient was able to leave the hospital cured.

Mr. PEARCE GOULD added some details of the operation.

Mr. GEORGE CUNNINGHAM then read a paper upon a system of international notation. M. Grosheintz, of Paris, had suggested (1) to represent the teeth by the first letter of their Latin name; a capital standing for the first, the ordinary type for the second tooth—thus, B first bicuspid, b second bicuspid. (2) Two lines (one horizontal, the other oblique) from above or below were to designate, by the opening of the angle, the right or left sides, and according as the oblique line was above or below the upper or lower jaw was indicated. (3) The letter C added to above stood for temporary teeth. (4) 1, 2, 3, 4 placed after the letter gave the degree of caries. (5) The surfaces were also designated by letters. (6) Abbreviations are given to describe disease, medicaments and fillings used. A commission appointed to consider the best system adopted the 8 as the best, four groups of eight numerals starting from the middle line, the respective teeth of the upper and lower jaws being indicated by the position of the numbers above or below the horizontal. A vertical line on the median line side of the figures indicates their position relative to the median line. In Hillischer's system this line is replaced by a point or space; Dubois' system, adopting the odd numbers up to fifteen for the teeth on the left side, the evens up to sixteen those on the right, while a line below the numeral indicates the position in the lower jaw, was considered useful as being easy to commit to memory and requiring few and simple signs for its committal to writing. The temporary teeth are to be represented by the numerals 1 to 10 with a decimal point before them, following the same system as with the permanent. To indicate the *surfaces* of the teeth Mr. Cunningham's system of notation was adopted by the Commission, except the *t* (tritulating) was employed instead of *c* (coronal) to represent the crown surface; *l* stood for labial or buccal; *p* for palatine or lingual; while a segment of a circle stood for cervical; *m* and *d* stood for mesial and distal respectively. In conclusion, Mr. Cunningham

dilated upon the advantages likely to accrue from the use of an international code in dentistry.

Mr. HARRY BALDWIN spoke in disapproval of the systems which had been mentioned in the paper, stating that the old method of notation as now commonly employed was both more simple and more easy to remember, and far less likely to lead to confusion.

Mr. WALTER COFFIN also deprecated any introduction of complications into the system of notation, and pointed out that when single and double ciphers were used, there must always be a danger of confusing two single ciphers for one double—*e.g.*, 13 might be taken as one and three or thirteen.

In reply, Mr. CUNNINGHAM said he had felt it a duty to introduce the matter in order to get it well threshed out. The confusion to which Mr. Coffin had referred could not occur, as single ciphers were always separated by a comma or adequate space.

The PRESIDENT (Mr. Felix Weiss) then gave his inaugural address. After thanking the Society for the honour it had conferred upon him, Mr. Weiss said he thought his elevation to the chair should point a moral to the younger members of the Society, as it showed that the leaders of the profession were ready and willing to recognise patient industry and a contempt for charlatanry. He could not help contrasting the confusion and multitude of schemes advanced with much warmth in the old days, fifty years ago, with the unanimity which at present obtained. Many weary hours and many anxious meditations marked those days of professional progress, and the record should not be passed over nor its influence forgotten. With the name of Arnold Rogers will ever be associated this memorable period, for it was he who in no small measure contributed to consolidate the union of the dental profession. Mr. Weiss then dwelt upon the subject of heredity and said he joined issue with those who averred that in the matter of teeth girls take after their father, while boys follow their mother in physical development. That the teeth greatly resembled those of the one parent or the other Mr. Weiss felt assured, not only in shape but in structural development and position. The one parent or the other transmits these organs, and the peculiarities of each are kept distinct. The strength of the law determining the transmission from the parent was at present unknown and incapable of measurement. Inherited physical traits are commonly overlooked unless they are abnormal or amount to a deformity. Various instances were cited of inherited peculiarities. Peculiarities in the shape of teeth are common. One patient possessed superior molars, having a well-formed cusp on the lingual side; this was so marked as to closely resemble a little canine attached to its side. Of the six children of this gentleman, four boys possess a similar peculiarity. The two younger children, a boy and a girl, both under six years of age, showed a spur of enamel springing from the lingual side of their temporary molars. That the peculiari-

ties found in temporary teeth should be imitated in the permanent teeth is not uncommon in Mr. Weiss' experience. Peg-shaped teeth replacing the lateral incisors may be inherited, and so in the same way are irregularly placed teeth. Thus parents with over or underhung jaws not infrequently have progeny with the same peculiarity. The peculiarities of a family were described. The father possessed a large square bold lower jaw overlapping a small upper maxilla, while the mother possessed perfectly regular jaws. The eldest son and the eldest girl resembled their father, the girl's upper jaw being very painfully crowded. The third and fourth children (boys) had perfectly regular jaws like their mother, while the two youngest, again, resembled their father. As to the question of the inheritability of dental caries, Mr. Weiss felt it was extremely difficult to come to a satisfactory decision, as it was seldom possible to ascertain when the teeth of successive generations of a family were attacked. In a case under his care the mother admitted losing the four bicuspid from disease at the same age as her daughter. In another every member of a family as well as their mother lost their first molars from caries, the disease appearing about the same time, and progressing in spite of all efforts to check it, and this although the remaining teeth were wholly free from caries. A further case was cited of a severe neuralgia cured by the removal of a central incisor. The pain had persisted for two years, and been very severe. No caries was present. The tooth on removal was seen to be free from caries or thickening of the cementum, but the fang was roughened and a little absorbed. The similar tooth in the mouth of this lady's mother was dead. The mouth was peculiar further in that the temporary molars persisted and were firm and free from disease. In this family no wisdom teeth existed, neither in the mother, aged fifty-five, nor the daughters, aged twenty-three, twenty-six and thirty. Pitted and honeycombed teeth traceable to illnesses are, Mr. Weiss finds, also inherited. In conclusion, the following deductions were made :—That the teeth distinctly take after the one parent or the other, as well in health as in disease ; that the intemperance of parents results in one form or other of degeneracy, commonly idiocy, frequently in caries or other diseases of the bony system. Diseases are known to remain latent in the system for years—why not caries and other diseases of the teeth ?

At the conclusion of the address, Mr. J. SMITH TURNER proposed, in a few warmly eulogistic sentences, that the Society return thanks to the President for his address, which Mr. MORTON SMALE seconded, and this was acceded to with acclamation.

The meeting concluded with the usual vote of thanks to contributors of casuals and papers, and with the announcement that at the next meeting, to be held March 3rd, Messrs. Bland Sutton and Charters White would read a paper on "Ovarian Teeth ;" Mr. Storer Bennett would report on Mr. Harding's case of impacted fracture of a tooth,

and casual communications would be given by Messrs. W. F. Henry and F. J. Van der Pant on "Shell Corners for Restoring Defective Teeth," and "Non-eruption of Permanent Upper Laterals and Lower Centrals" respectively; also by Mr. J. Ackery on "Three Cases in the same Family of Missing Lower Incisors."

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### Description of a Specimen of Cleft Palate (with four woodcuts).\*

By JOHNSON SYMINGTON, M.D., F.R.S.E.

LECTURER ON ANATOMY, MINTO HOUSE, EDINBURGH; EXAMINER IN ANATOMY IN THE UNIVERSITY OF EDINBURGH.

THIS specimen was met with in a male subject, aged seventy, dissected in my rooms last summer session. The cleft was obviously congenital, and extended through both the hard and the soft palates and the right alveolar arch. It opened above into the right nasal cavity.

The upper jaw was practically edentulous, so that it was not possible to determine the relation of the cleft to the incisor teeth. It may be noticed, however, that the cleft passed through the alveolar arch barely a quarter of an inch external to the frœnum of the upper lip, so that on the right side there was obviously not room internal to the cleft for more than the central incisor tooth.

Mr. Bowman Macleod kindly made a cast of the deformity for me, and I then froze the specimen, and made a series of transverse vertical sections through the palate, nasal cavities, and maxillary sinuses. Sections of this kind are very useful for the demonstration of the relations of the palate and nasal cavities, and Zuckerkandl† has employed this method very extensively for the illustration of diseased conditions of the nasal cavities. I have, however, been unable to find any published drawings of similar sections in cases of cleft palate. Indeed, the illustrations of this condition appear to be practically confined to representatives of the cleft as seen from the mouth. These figures, which are generally diagrammatic, merely represent what can be readily seen on an examination of the deformity in the living body, and give a very incomplete view of the condition of the palate and nasal cavities.

Fig. 1 is a drawing of the cleft in my specimen, as seen from the oral aspect. There is a cicatrix in the upper lip below the right nostril, and it looks as though there had been a hare-lip on that side

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\* Read before the Odonto-Chirurgical Society of Scotland, December 12th, 1889.

† Normale und Pathologische Anatomie der Nasenhöhle. Wien. 1882.



which had been operated on. The anterior part of the alveolar arch to the left of the cleft projects lower down and overlaps somewhat the thickened and warty-like mucous membrane attached to the alveolar arch on the right side of the cleft. The left alveolar arch gradually becomes less prominent as it passes backwards. The fissure extends through both hard and soft palates, and there are two distinct uvulæ.

Four transverse vertical cuts were made with a saw, so as to divide the specimen into five pieces. The two anterior cuts went through the nasal cavities, and the two posterior ones through the nasopharynx. The transverse lines on Fig. 1, numbered 1, 2, 3, and 4, indicate the position in which the sections were made.

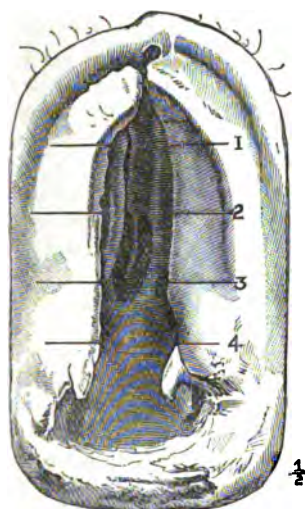


FIG. 1.

Fig. 2 is from a tracing of the posterior cut surface of the anterior slab. The ethmoidal sinuses and superior and middle turbinated processes are fairly symmetrical, except that the right middle turbinated process is distinctly smaller than that of the left. The septum nasi passes downwards, and slightly to the right for  $1\frac{1}{4}$  inches. At this point it is thickened, and then makes a very marked bend downwards and to the left, to join the left palatine process.

It will be seen that the fissure, although opening into the right nostril, is situated to the left of the mesial plane, and the closure of the left nasal cavity is not associated with any marked development of the palatine process on that side, but depends upon the deflection of the septum nasi to the left. The vertical thickness of the left

alveolar arch is decidedly greater than that of the right, but it lies farther from the mesial plane. The antrum of Highmore is larger on the left than on the right side. The openings from the antra into the infundibula are anterior to the section, and there are no apertures leading directly from the antra into the middle meatuses.

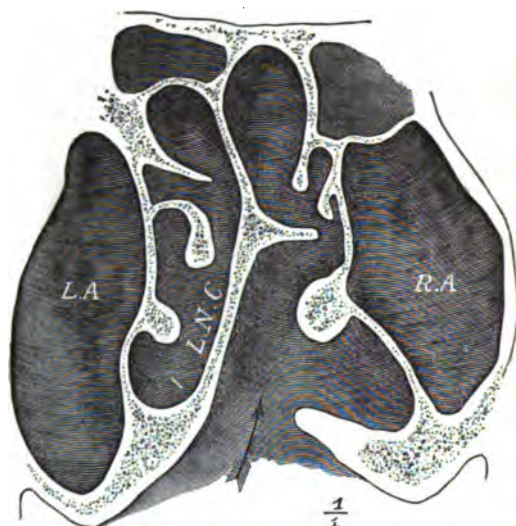


FIG. 2.

Fig. 3 shows the posterior surface of the second slab. It will be observed that in this plane the septum has a very prominent ridge projecting from its right side into the space between the superior and middle turbinated processes. Below this ridge the septum inclines downwards and slightly to the left. The antrum extends much lower down on the left side than on the right.

Fig. 4 is taken from the posterior surface of the fourth slab. The body of the sphenoid is divided nearly half-an-inch behind the posterior clinoid processes. The left sphenoidal sinus is opened, but the right one does not extend so far back. The section is a little behind the pterygoid processes, and corresponds to the pharyngeal ends of the Eustachian tubes. Each Eustachian tube is bounded internally and above by its cartilage, the outer wall being membranous. The two halves of the soft palate are of about the same thickness. Below the Eustachian orifices they are about three-quarters of an inch thick, but become rather thinner as they approach the mesial plane. This section shows extremely well the relations of the palatal muscles.

The levator palati forms a well-defined mass of muscular tissues which lies just beneath the mucous membrane, covering the upper

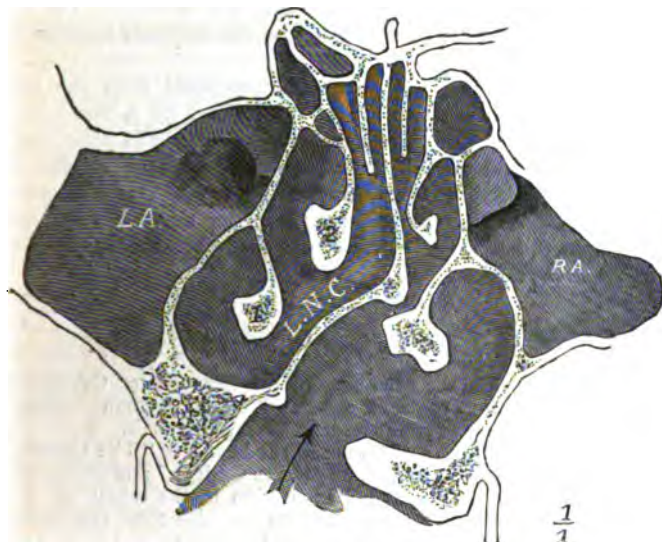


FIG. 3.

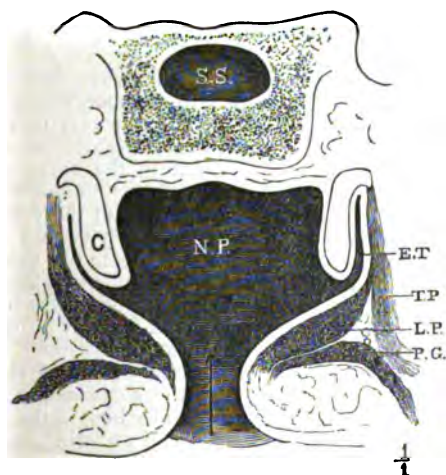


FIG. 4.

surface of the soft palate. The tensor palati appears as a thin sheet of fibres lying external to the Eustachian tube. On the right side,

after removing a little fat, its tendon was easily traced to the hamular process of the internal pterygoid plate. A small bundle of fibres connected internally with the lower part of the levator palati, and passing outwards and downwards, belongs to the palato-glossus. The section is immediately in front of the tonsils, and consequently anterior to the palato-pharyngeus.

The muscles of the soft palate are separated from the mucous membrane on the oral surface of the palate, by a thick layer of glandular tissue and fat. It is scarcely necessary to point out how clearly this specimen demonstrates the relations of the muscles of the soft palate, as described by Sir William Ferguson. It also shows that the levator palati lies much nearer the upper than the lower surface of the soft palate, and, therefore, can be most readily divided by Ferguson's method.

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### Manchester Odontological Society.

ON January 18th, the members of the Manchester Odontological Society dined together at the Grand Hotel, Aytoun Street, Mr. WILLIAM HEADRIDGE, the president, taking the chair.

After the CHAIRMAN had proposed the health of "The Queen,"

Dr. PARSONS SHAW gave "The Owens College," remarking that the planting of a great educational institution in the midst of a great community like Manchester seemed to promise that the youths of Manchester in the future would become better men and more useful to the world at large. With regard to the dental profession, he might remind them that before Owens College was established they had very little opportunity for dental education. Now, however, they had a chance of getting a dental education which could be made second to none in the world.

Mr. G. CAMPION, who responded to the toast, said he was quite sure the College was doing its utmost to advance education amongst all classes of the community. During the past year or two considerable advances had been made in the dental department, advances not merely in the number of students, but in the organisation of the department. For instance, a special dental Committee had been formed to overlook the interests and the work of the department, and the result had been that an interest had been evoked in that work which was altogether foreign to it before. Some two years ago one of the professors told him that the dental department at the College was looked upon more or less as an experiment, and unless some enthusiasm and interest was evinced in it it would speedily be dropped. He need hardly say that that was quite out of the question. He believed the department had now taken its position as one of the permanent departments of college work, and that it was destined to grow and to become in a few years second to no dental school in the kingdom.

Mr. T. MURPHY (Bolton) proposed "The Victoria Dental Hospital."

Mr. T. RENSHAW (Rochdale), in acknowledging the toast, said he believed that in the Victoria Dental Hospital they had one of the best institutions of the kind in the country, not only as a charity but as a dental school. The Victoria Dental Hospital offered facilities to young

students for acquiring a thorough knowledge of their profession such as could not be excelled either in London or any other place. That was partly due to the connection between the Hospital and the Victoria University, and partly to the fact that it was in the midst of a crowded manufacturing and mechanical centre, and their students consequently were half educated in mechanical ideas before they came to the Hospital. From statistics he had seen, he thought the Hospital had proved of great value both to members of the profession and to the poor of Manchester and the surrounding districts.

Mr. H. C. QUINBY (Liverpool) proposed "The Manchester Odontological Society." He said that 30 years ago there was a great number of dentists in Manchester, but scarcely any two of them were on speaking terms. Narrow and selfish were the professional views of those days. Trade secrets were "portable property," and it was thought that they should not be allowed to pass out of their own hands. Few dentists then, he feared, missed an opportunity of insinuating that Jones, Brown, or Robinson would have failed to do, or perhaps did not know how to do, what was simplicity itself to him who was speaking. They glorified themselves and depreciated their neighbours, if not to their satisfaction they at least thought to their pecuniary gain. A great change took place, however, when Parliament recognised them as a profession, and ever since then they had been advancing. Societies of the same character as the Manchester Odontological Society had done much to advance their profession and sweep away narrow prejudices, and he hoped that before long the number of such societies would be largely increased.

The other toasts were "Our Guests" and "The President."

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### Medical Society of London.

THE meeting on Monday evening last (Feb. 10th) was devoted to an address by Dr. Lauder Brunton on the salient features and practical results of the experiments and observations carried out by him in conjunction with other gentlemen, under the auspices of the Nizam of Hyderabad, the substance of which has already been published by us in abstract. The President (Dr. C. Theodore Williams) in a few graceful words welcomed Dr. Brunton back to this country and to the Society, and assured him of the interest which his researches had excited in professional circles. Dr. Brunton then proceeded to describe how the inquiries had been brought about, and alluded briefly to the previous researches which had been made with the same object in view, viz., to determine the difference in the mode of action of chloroform and ether respectively, and the precise mechanism by which death was brought about when a lethal dose of either was administered. He described the apparatus which served to register the results of their experiments, and urged that the reproduction of the charts with the details of the experiments would enable medical men all over the world to control, and if necessary, to revise, their deductions in respect of the conclusions to be drawn therefrom. He showed by photographic reproductions of the charts of the blood pressure that a fall in blood pressure took place when either chloroform or ether was administered, the rapidity of which depended more upon the amount used than upon

the particular anæsthetic employed. He narrated the experiments having for object to determine the existence of a paralysing effect on the heart, and stated that the outcome of their researches had been to prove that both ether and chloroform paralysed respiration before arresting the heart. He likened the two anæsthetics to a blunt and a sharp knife respectively, chloroform being much the more powerful agent in every respect. In skilled hands the sharper instrument was to be preferred as being more potent for good as also for evil, if carelessly or improperly administered. He insisted upon the prime importance of watching the respiration, which was invariably the first to cease. He added that in tropical climates it was impossible to obtain pure ether, for it would not keep, hence the experiments had to be made with impure ether.

Mr. BAILEY, the well-known anæsthetist, declined to be guided by laboratory experiments, the result of which was at variance with clinical experience. He denied that it was desirable to concentrate one's attention upon the respiration alone, and urged that the pulse, the pupil, and the colour of the complexion ought equally to receive notice. He insisted that ether was by far the safer anæsthetic when properly administered, and he said that almost without exception the surgeons with whom he was acquainted preferred it for the production of anæsthesia.

Mr. BRAINE concurred in the opinion expressed by the last speaker and suggested that the difference in the climate of India might have something to do with the difference in the results obtained. He denied that in human beings the cessation of respiration was to be remarked before the heart had ceased beating, and urged that when clinical experience was contradicted by the results of experimental investigations, then preference ought to be given to the former.

Dr. SANSOM, Dr. ROUTH, and others also spoke on the subject, and Dr. BRUNTON having briefly replied, the Society adjourned.—*Medical Press.*

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### Liverpool Dental Hospital.

THE annual meeting of the subscribers to the Dental Hospital took place at the Town Hall on January 21. The Mayor presided, and there were also present Dr. Dawson, Messrs. H. E. Brakell, J. Wannop (treasurer), T. M'Cracken, R. Jones, C. Birchall, J. Kendall, J. R. R. Scott, W. L. Jackson, and H. F. Briggs. The report showed that the total number of patients admitted since the foundation of the hospital had been 246,652. During the past year 25,836 patients had been treated, including 11,630 children. There had been 34,868 operations. The patients' contributions amount this year to £99 19s. 4d. The mortgage on the Mount Pleasant premises remained at £450, and the balance due to the treasurer was £45 13s. 6d. The committee stated that unless the income of the institution can be enlarged its operations will have to be curtailed.

The MAYOR, in moving the adoption of the report, congratulated the committee on the increased work which they had done during the year. Looking, however, at the class of people who generally resorted to these institutions, he did not think £100 was an adequate acknowledgment on their part for the work that had been done for them.

He would suggest that the committee should make an increased charge for the great benefits which had been conferred upon them.

Dr. DAWSON seconded the motion, which was carried.

The various retiring officers having received votes of thanks, and the officers for the ensuing year having been elected, an alteration was made in the rules by which the entrance fees were slightly increased.

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### Edinburgh Dental Hospital.

THE annual meeting of the directors and contributors of the Edinburgh Dental Hospital was held on Thursday, January 30, in the Hospital, 5 Lauriston Lane. Dr. John Smith in the chair.

Mr. LINDSAY MACKERSY, W.S., the honorary secretary, submitted the committee's annual report, which stated that the new premises had now been occupied for over ten months, and that the change had been found to be altogether for the advancement of the Hospital and of the public interest. The record of the year's work they regarded as a very gratifying one, and as showing the gradually increasing area of the usefulness of the institution. The number of patients during the year had been 8585, against 8142 in 1888—an increase of 242. The number of cases in which remedial and preservative treatment had been afforded showed a slight increase on that of the preceding year, and the committee hoped that as the poorer classes became aware of the preservative resources of the institution and of the great comfort following regular and periodical attention to the teeth, greater advantage would be taken of this department. During the year the total number of stoppages had been 2186; of ordinary extractions, 5844; of extractions under anæsthetics, 306; and of mechanical cases, 49—in all 8385. The annual financial statement, which Mr. W. BOWMAN MACLEOD, the hon. treasurer, submitted, stated that although the expenditure for the year had been of an extraordinary nature, consequent on the expense of removing to and fitting up the new premises, there was a balance at the end of the year of £334 9s. 3d. in favour of the institution. The amount of the income for the year (including £530 brought forward from the preceding year) had been £900 4s. 6d., and the expenditure had been £565 15s. 3d. There had been a marked increase in the revenue from hospital fees, and this the committee regarded as a guarantee that the teaching and practice of the hospital was of a thorough and instructive character.

On the motion of the CHAIRMAN, who characterised the reports as exceedingly satisfactory, they were adopted.

The other business included the appointment of office-bearers and the ratification by the meeting of the following interim appointments:—Mr. William Forrester to the senior staff; Messrs. Frederick Page, David Munro, and John Turner to the junior staff; and Mr. J. Gregory as extra assistant. Mr. Thomas Wallace, actuary of the North British and Mercantile Insurance Company, was elected treasurer in room of Mr. Macleod, who was thanked for his services during the last ten years. The committee were empowered to advertise for an extra chloroformist; and it was remitted to them to consider the propriety of securing the services of a dental mechanic.

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### Glasgow Dental Hospital.

THE annual meeting of the Glasgow Dental Hospital was held January 31, in the Religious Institution Rooms. Mr. John Wilson, M.P., presiding.

Mr. D. M. ALEXANDER read the fifth annual report, which stated that the hospital had to be removed from George Square to a disused house in Chatham Place, off Stirling Road. This change had checked the attendance, the number of patients having fallen off from last year's record of 8246 to 6048. There had been performed during the year at the hospital 5922 operations. These consisted of—Extractions, 4932 ; and the preservative operations numbered 990. The fees from the students had increased during the year from £28 7s. to £98 3s. 6d. But unless a large increase take place in the number of students during the coming year, this source of income would not be available for this year, as the fees paid by the students covered two years' attendance at the hospital. In response to the appeal made by the directors to the public, their subscriptions during the year had only increased from £97 14s. to £102 15s. 6d. To make the hospital self-supporting, this contribution from the public would require to be doubled. To meet the needs of this useful institution an income of about only £250 was necessary, and looking to the large amount of human suffering which it was helping to ameliorate and prevent, the directors felt confident that the public must believe that an increased contribution on their part would be not only well but economically spent.

Mr. WILSON, M.P., in moving the adoption of the report, said that although the institution had existed only five years, yet much good work had been done, and many poor persons had been relieved who otherwise would have been put into the hands of men who could not properly assist them. It was a modest institution, as the small sum collected and the great work done showed. He thought, however, that the hospital had not the support that was expected. Glasgow was known all over the world for its benevolence, but the Dental Hospital had not shared in it. He hoped the support would be more liberal.

Preceptor WADDEL, in seconding the motion, also hoped the hospital would become better known, and that the citizens would extend more aid.

A committee of management and an auditor were appointed. Thanks were awarded to the professional gentlemen who had given their services and foregone their fees, and the proceedings concluded with the usual compliment to the chairman.

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### The Brighton Dental Hospital.

ON Friday afternoon, January 31, the President (Dr. Ewart) took the chair at the annual meeting of the governors and subscribers of the Brighton, Hove and Preston Dental Hospital, Queen's Road. Amongst those present were Mr. Octavius A. Fox (who has during the year retired from the post of consulting surgeon), Mr. S. P. Johnson, Mr. John Tucknott, Mr. J. H. Redman, Mr. Wells, Dr. W. Harrison, and Mr. John Wood (hon. treasurer). In the report read by the hon. secretary (Mr. J. R. Gwatkin), the governors and subscribers were



congratulated upon the removal, during the year, of the institution from the cottage in Marlborough Place to the more commodious premises in Queen's Road, but regret was expressed that the subscriptions had not increased in the same proportion as had the expenses through the change. A balance in hand of £25 in 1888 had been changed to a deficiency of £30. The number of patients (1,570 in 1887 and 2,214 in 1888) had increased to 2,583. Disappointment was felt that, considering the benefits experienced by mechanics, more assistance was not received from workmen's boxes. In moving the adoption of the report, the Chairman pointed out how cordial had been the recognition in all quarters of the usefulness of the institution, and expressed confidence that as soon as the public were aware of their wants they would be quick to relieve them. The report was adopted, and votes of thanks were passed to the honorary medical officers and to the staff generally.

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### Victoria Dental Hospital of Manchester.

THE Annual General Meeting of the governors of the Victoria Dental Hospital of Manchester was held yesterday evening, in the Board-room of the hospital, Grosvenor Street, Chorlton-on-Medlock, Mr. S. L. HELEN in the chair.

Mr. T. NORTH (Assistant Secretary) read the sixth annual report of the Committee of Management, which stated that "the number of patients availing themselves of the benefits of the institution is still on the increase. The Committee consider that the very large number of nearly 12,000 patients satisfactorily proves the continued appreciation by the poor sufferers of the many advantages which the hospital offers of receiving the best advice in all diseases relating to the teeth. The total number of patients who have been recipients of the benefits of the hospital since it first opened its doors to the public in March, 1884, reached the total of nearly 59,000. Your Committee desire to urge most earnestly upon the inhabitants of Manchester the claims of this institution. It must be borne in mind that it is the only one of its kind in Manchester and the district—that it is not merely a hospital, but a school of dentistry, in which a large number of young men are being trained for the performance of their important professional duties. The Committee would also point with satisfaction to the fact that all the pupils trained under the auspices of the staff of this institution have passed their examinations at the Royal College of Surgeons, London, and kindred bodies, with marked success. In conclusion, your Committee desire to state that the building at present occupied is quite inadequate to meet the demands of the hospital and dental school. The number of pupils continues steadily to increase, and the demands of the Dental Committee for more space are very urgent. Your Committee are, therefore, desirous of obtaining funds to enable them to procure a site and erect thereon a building capable of meeting the requirements of the institution, and they would specially press this matter upon the attention of the governors and subscribers."

The HONORARY TREASURER (Mr. F. W. Travers) read a financial statement which showed a small balance in hand, but explained that the money was already pledged, and they commenced the year in debt.

Mr. HENRY CAMPION read the report of the Dental Committee, of which he is chairman. The report stated that during the year 11,920 patients had been treated.

In moving the adoption of the report, the CHAIRMAN said it was satisfactory to see that the work of the hospital was progressing so satisfactorily. As to the necessity of the institution there was no doubt, but he was afraid the population did not sufficiently well know of its advantages. It was surprising how ignorant people sometimes were about the state of their health, and the cause of its being bad ; therefore the more it was known there was such an institution as that, not for the treatment of teeth only, but of complaints that produced disease of the teeth, the better it would be for them. One of the principal features of the hospital was its use as a training place for students, and young men were fortunate in having such a place to attend. Having stated that a room had been set apart for the preparation of plates specially for children, the Chairman referred to the desirability of having large premises more centrally situated. All that was needed was funds, and they trusted that some friends would come forward with £1,000 or £2,000 as a nucleus, after which they would, no doubt, get along very fast. The work ought certainly to be taken in hand soon.

Mr. COPINGER seconded. He was quite sure that when it was generally known there was such an admirable institution doing such good work unobtrusively, the wealth of Manchester would find the necessary funds. It was the beginning that offered most difficulty ; if they could get a few to make a start they would probably have sufficient funds in a few months. It was thought that about £10,000 would purchase a site and erect a building. The institution was the only one of its kind in Manchester, and had hitherto been carried on with subscriptions and donations amounting to less than £100 a year. Last year the subscriptions were only £86 10s., which was a very small sum indeed for the public of Manchester to give. It was worth noting that well-known men who subscribed to the medical and other charities in Manchester had not given that attention to the hospital that its merits deserved.

The motion was carried.

Mr. H. CAMPION moved that the following be re-elected : Mr. T. Black, Mr. A. Crewdson, Mr. S. L. Helm, Dr. D. B. Hewitt and Councillor A. Marshall, committee ; Mr. F. W. Travis, hon. treasurer ; Mr. H. L. Knoop, hon. secretary ; and Mr. Herbert Kidson, hon. auditor.

In seconding, Mr. H. PLANCK said in his opinion the work of the school was even more important than the work of the charity, for whereas the latter affected the interests of the number treated only the former affected the interests of the whole community.

The motion was carried.

A vote of thanks to the committee and officers was accorded, on the motion of Dr. SHAW, seconded by Mr. HEADRIDGE, and a similar compliment to the chairman, moved by Mr. TRAVERS, and seconded by Mr. G. O. WHITTAKER, closed the proceedings.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

We draw the attention of our readers to the following two letters from the *LANCET* :—

### The Relative Safety of Anæsthetics.

TO THE EDITORS OF THE "LANCET."

SIRS,—It may appear almost ungenerous to criticise the conclusions at which the Hyderabad Commission has arrived, when all its members have thrown themselves heart and soul into the labour, and have spared no pains to get at the truth of the great question as to whether chloroform ever produces a fatal result by cardiac failure before the respiratory functions are affected; but if I remain silent I shall probably be considered as acquiescing in those conclusions, and therefore I trouble you with this letter.

I greatly fear that, as a result of the Hyderabad Commission, the opinion that death from chloroform is always prefaced by some change or sign of danger in the patient's breathing will gain ground. But does the Commission prove this? I think not. What it does prove is that in dogs and monkeys and some other animals, in India, respiration always gives warning of an over-dose and ceases from one to ten minutes before the heart stops for ever. This is no new statement, for in Snow's work on Anæsthetics, published in 1857, we find the following passage: "The greater number of experimenters who have killed animals with chloroform have found that the action of the heart continued after the breathing ceased, but they did not either control or ascertain the proportion which the vapours of chloroform bore to the inspired air. In Mr. Thomas Wakley's experiments the action of the heart continued after the breathing had ceased; and this was the case in a great number of experiments performed by a Commission which reported to the Society of Emulation of Paris in 1855." This Commission came to the conclusion that "in all instances in which animals are killed by chloroform the action of the heart survives the respiration; but they might have administered chloroform to an equal number of human patients without any one of them being cut off by sudden paralysis of the heart." Evidence, as we all know, is of two kinds—positive and negative; and if three cases of death in the human subject are brought forward which have happened in England or in climates resembling ours in which the heart has ceased beating and the patient has gone on breathing afterwards, then I affirm that these cases are of far more importance to us as practical anæsthetists, and far outweigh the 430 experiments which were performed on dogs, monkeys and other animals in the tropical heat of India.

The Commission states that it has searched the records of accidental deaths from chloroform in Great Britain since 1855, and they find that there is not a single death from chloroform recorded in which it was proved that the respiration alone was attended to throughout the inhalation. I also have carefully gone through these same cases, and the conclusion I arrive at is that all these cases were watched with the greatest care on account of the administrator not knowing from which quarter danger might arise, and although it is not specially stated that the respiration was watched, I cannot for one instant doubt that it was well attended to. But to my mind this.

is a side question altogether, for from the details of cases quoted a little further on, there can be no doubt that the primary cause of death was cardiac failure, cessation of respiration being secondary. One very important point to note is that in these cases death took place in one instance in 120 seconds, in another in about sixty seconds, and in a third at five minutes from the commencement of inhalation. Now notice how different these times are from those in the fatal cases of the Commission. Not one of the 197 animals died in as short a time as the second case quoted; while the heart of one dog went on struggling for over ten minutes after respiration had ceased, not counting the time of inhalation. There is no doubt that in the human subject, when the breathing stops artificial respiration is the best proper treatment, and these are the cases which cause the surgeon intense anxiety, but which do not, or very rarely, end fatally; but when sudden and general pallor comes over the face, together with sudden loss of pulse, then the patient is dead in ninety-five cases out of a hundred.

It may be objected that in quoting these cases I am going a long period back; but they are typical cases, and they have gone on occurring in much the same way up to the present time, and they will continue so to do as long as chloroform is administered. I have the less hesitation in quoting these particular cases, for in each of them the anæsthetic was given without any inhaler, all forms of which the Commission condemns. Referring to the three fatal cases above mentioned from Snow's work on Anæsthetics, I find:—

CASE 1.—Hannah G——, aged fifteen, of Winlaton, near Newcastle, operation to be performed being evulsion of a toe-nail, a similar operation having been performed under ether a few months previously. On Jan. 28th, 1848, chloroform was administered upon a handkerchief, a drachm being poured on it, patient being seated in a chair. In half a minute Dr. Meggison, the administrator, finding no change in the breathing or alteration of the pulse, tested her sensibility by pinching the cheek, and finding no reflex, told the surgeon he might commence. Patient moved when the incision was made, and more chloroform was about to be given, when the following events happened: lips suddenly became blanched, and she spluttered at the mouth. Cold water was dashed on the face, and the patient laid on the floor. Venesection in the arm and in the jugular vein was performed, but no blood flowed. The entire proceedings from the commencement of inhalation is said to have been two minutes. From the lips becoming suddenly blanched in the above case there is every reason to conclude that the heart was suddenly paralysed. The patient breathed for a little after this, and was able to swallow, though with difficulty. (Dr. Snow's remarks.)

CASE 2.—Patrick C——, age not stated. March, 1848. Disease, fistula. Had taken chloroform once previously. Time of inhalation about one minute. Quantity consumed half a drachm. Lapse of time till death, about one minute. Patient on his side, chloroform was administered on a handkerchief or towel. Immediately the operation was commenced the patient became pulseless, his pulse previously being full and natural. Here the period of inhalation was very short, one minute, and the evidence of paralysis of the heart distinct.

CASE 3.—J. V——, aged seventeen. Hôtel Dieu, Lyons, January 1849. Amputation of finger. Chloroform was dropped upon gauze



land during the last thirty years, I feel absolutely certain that, if this deduction is acted upon, the number of fatal cases, even now too numerous, will rapidly increase. I maintain that the administrator should watch equally the face, the pulse and the respiration, sudden pallor of the face being of far more importance than partial interference with the breathing. The precautions mentioned in the remaining paragraphs are usually carried out in the London hospitals. Time alone will show whether the sanguine future the Commission believe to be in store for chloroform will come to pass if their rules for its administration are carried out.

I remain, Sirs, yours faithfully,

WOODHOUSE BRAINE.

*Feb. 3rd, 1890.*

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TO THE EDITORS OF THE "LANCET."

SIRS,—Just as modern industrial life is the outcome of the introduction of steam, so modern surgery is based upon the use of anæsthetics. Whatever relates to fatalities during anæsthesia is therefore of the greatest importance to every practical surgeon. With nearly half a century's experience at our back, it is surprising—in these days of advancing science and greater accuracy in many respects—to find that even now we have no really reliable information as to the relative frequency of such occurrences. Rough estimates there are in abundance, the value of which may be judged from the fact that they vary, for chloroform, from 1 in 36,500 to 1 in 2,666 administrations.

My object in writing this letter is to point out that a perfectly reliable source of information is now available, so that in future there can be no excuse for ambiguity. For many years past there has been kept at St. Bartholomew's Hospital a most admirable record of the administration of anæsthetics and of the fatalities which have occurred. These have been published from year to year with the annual statistical reports of the hospital. Believing the subject well worth a little trouble, I have tabulated these records for the ten years 1878-1887. During this time chloroform was administered 12,368 times, with 10 deaths (1 in 1,236). During the same period ether was administered 14,581 times with 3 deaths (1 in 4,860). In 9,072 of these cases ether was preceded by gas; 1 fatal case belongs to this category. In the other 5,509 cases ether alone was given, and 2 deaths occurred.\* These facts are very eloquent; they require no lengthy comment. I have long been aware of the greater safety of ether, and have therefore preferred it to chloroform in most cases notwithstanding its disadvantages in some other respects. I believe this is the goal towards which professional opinion is steadily moving; and I think this movement likely to be most beneficial. Experience at other hospitals leads me to believe that the results obtained at St. Bartholomew's may be accepted as reliable averages. There can be no doubt, in these cases at least, that most of the fatalities occurred in spite of the greatest skill and care being used in the administration of the anæsthetic agents. Such being the case, it is impossible to arrive at any other conclusion than that such occurrences are unavoidable in a certain proportion of cases.

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\* It is right to state that in each of these cases the patient was in exceedingly feeble and collapsed state before exhibition of the anæsthetic owing to prolonged intestinal obstruction.

I cannot conclude this letter without emphatic protest against the dictum of the Hyderabad Commission, that such deaths must be ascribed entirely to carelessness on the part of the administrators. Such a statement is opposed to all clinical experience, and it is simply preposterous.

I am, Sirs, yours truly,

W. ROGER WILLIAMS.

*Welbeck Street, W., Jan. 30th, 1890.*

## History and uses of the Protected Surgical Electric Lamp.

BY N. STEVENSON, M.R.C.S., L.D.S.

IN 1883 I designed an electric light for dental work. The lamp was made expressly for me by the Swan Electric Light Company. It was fitted into an ivory socket firmly screwed to a metal tube like a No. 8 catheter, and covered with a glass shade, so as to allow sufficient air space, to prevent contact at any point between the two. The tube passed through a suitable wooden handle, and being open at each end, allowed the air to circulate freely. It was described at the time in the medical journals, and exhibited at the Pathological and Odontological Societies of London and Edinburgh, but the difficulty in getting the lamps and unsatisfactory working of the batteries made me abandon the use of it; now, however, that better lamps can be easily obtained and that the batteries are immensely superior to the old ones, I have taken to use them again and adapted them to other surgical purposes besides my own.

Fig. 1. I find this lamp useful for any kind of examination where light is required without undue heat. It may be used in contact with any part of the body, if it is not kept lighted too long; for this reason I prefer to let the patient control it if possible, for then it can be lit at pleasure, and confidence is established. It is valuable in most operations of dental surgery, but especially so in preparing difficult cavities for fillings, or for working out nerve canals and in detecting exposure of the pulp. In cases of closure of the jaws from spasm or other cause, it gives enough light through a gap in the teeth to enable one to see perfectly the whole cavity of the mouth. It may be put into one nostril to examine the other by lighting it up through the septum. It is useful also (with a slight alteration in the bend of the stem) for gynaecology, and in abdominal surgery specially valuable.

Fig. 3 is another application chiefly useful for scaling long teeth sloping inwards. The lamp is fixed by the air tube to a flat silver ring, which is surrounded by gutta-percha, so that it may be conveniently held in position by passing the forefinger through it. Whilst the lamp lights the whole floor of the mouth, it also keeps the tongue out of the way, and the ring prevents the mouth from closing and protects the finger from the teeth.

I fitted another into the tongue plate of Mr. Smith's gag for cleft palate operations; with this the surgeon gets a perfect light, and is relieved from the nuisance of having constantly to dodge his own shadows; this, indeed, is one of the chief advantages in all these lights. The necessary air tube here is carried in a groove in one side of the lower limb of the gag, and emerges into the open air near the

hinge. The operator regulates both these instruments by pressing with his foot or knee a specially arranged switch for the purpose. If a constant light is wanted for a long operation, air would have to be forced through one tube and out at another by means of a similar arrangement to that used for diffusing spray, but although this would be less complicated than the hydraulic plan, it is quite unnecessary for ordinary purposes.



FIG. 1.

Diagram, half size, of lamp for ordinary purposes, showing the lamp full size.

Dr. Felix Semon suggested that I should try the experiment first employed by the late Professor Heryng to diagnose empyema of the antrum. He used a five-volt lamp, fixed to a tongue depressor, and in



a perfectly dark room, lighted the bones of the face from the mouth. I have repeated this with two five-volt protected lamps (Fig. 2) on one stem, and have further modified it by introducing them into the nostrils. The bright red in the facial cavities and the lurid glare of the soft tissues gives the face a ghastly aspect, the practical value of which is that if either antrum is diseased or filled with pus, it will be less luminous than the other, and the abnormal condition will be detected. Of course a naked lamp cannot be used in the nostrils, as the heat would be unbearable.

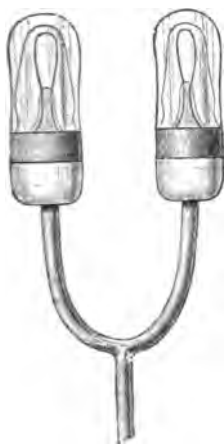


FIG. 2.

Fig. 2.—Five-volt lamps for lighting the bones of the face, either by mouth or nostrils.

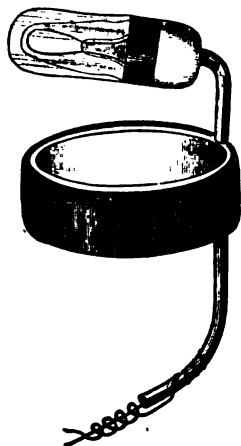


FIG. 3.

Fig. 3.—For dental operations. Both full size.

I cannot estimate the practical value to others of these instruments, but I think there must be many who will find them as I do of great service. I have myself made or mounted all those I have referred to, and if anyone wishes to do the same, I may as well mention that the lamps are from the Edison and Swan Electric Light Company, and are called five-volt pencil-shaped micros. In mounting the most important points are to have the lamps without other attachment than the conducting wires, and to hermetically seal the glass cover to the socket. Those who do not care to make them can obtain them with the batteries from Mr. Schall, Wigmore Street. The carbons are so delicate that the instruments must be handled with great care; a drop of three inches or anything hard will probably break them. I always try to place them gently on something soft, like blotting paper or velvet.—*British Medical Journal*.

## Unsuspected Lead Poisoning in Children.

By JOHN BROWN, M.D., D.S.SCI.,  
MEDICAL OFFICER OF HEALTH, BACUP.

ALTHOUGH the literature of plumbism is so voluminous, yet very little has been written as it regards the influence of lead in children. In no work specially devoted to diseases of children can any reference to plumbism be found. For about three years I have devoted considerable attention to plumbism due to water contamination from lead service pipes. In 1888 my attention was drawn to the fact that young children may suffer from plumbism—this is only what might be expected. By careful research I found about a dozen cases recorded, but nothing very striking in connection with the reports.

I am not aware that the blue line in the gums has been observed in children during the first dentition; when present it is a pathognomonic symptom of plumbism. Its absence does not prove the contrary. In children tartar is rarely present compared with adults. This is the reason why the blue line is so seldom found in children. I have notes of four children under five years, in whom the blue line was present; also eighteen over five and under ten years; total under ten years, twenty-two; ten and under fifteen years, twenty cases. Besides these forty-two in which the blue line was present, there were others who were suffering from plumbism in whom no blue line could be found because the teeth were kept free from tartar. In *Brain*, April, 1878, Dr. Buzzard reports a case of well marked lead palsy in which the blue line was absent, due, as Dr. Buzzard believes, to the exceeding care which the patient had taken to keep the teeth clean. In adults the blue line is most commonly observed in the gums of the incisors and molars. In children the gums of the incisors are often free, but the blue line may be observed on the gums of the molars. It is often associated with a peculiar form of caries, which attacks the crowns of the molar teeth at their junction with the fang. The surface or cusps of the teeth are sound; there is a cavity about two millimètres in diameter, which offers a nidus for food to lodge in. The food is decomposed probably by saprophytes and sulphuretted hydrogen is formed which combines with the albuminate of lead, and is deposited as the sulphide in the capillaries of the papillæ of the gums. The nature and mode of origin of the blue line in the gums are given in the *Medico-Chirurgical Journal*, vol. lix., 1876, page 327, by the late Dr. Fagge. Having made microscopical examination of the blue line I can confirm his views. The line is not continuous, but consists of a series of blackish brown dots, full of minute granules. Each dot is distinct from its fellow.

In twenty-one adults I observed blue patches on the mucous membrane inside the lips and cheeks. In every case it was opposite the deposit of tartar. Dr. Dobie, of Chester, reported two cases in which there were blue patches on the mucous membrane in adults, and he thought it was due to abrasion of the cheeks. From my observations of the twenty-one cases referred to, I am convinced that it is due to the tartar on the teeth. The following is an interesting case. A child, aged six years, had the mucous membrane deeply pigmented. The first lower molar on the right was displaced, the fang projecting against the cheek had caused an ulcer which was free from blue pigmentation, but a blue line was on the gums, proving that abrasion is not sufficient to cause pigmentation.

Children are not so susceptible to the toxic influence of lead as persons between the ages of fifteen and fifty years. Above and below those ages lead rarely produces the more severe symptoms of plumbism. In children, mercury, antimony and arsenic are known to be tolerated in comparatively large doses. This tolerance of lead in young children is probably due to lead being a nerve poison, and acts primarily on the nuclei of the nerve cells, especially the motor nerve cells. It is noteworthy how slight the symptoms of plumbism are in children in families where the adult members suffer from the most severe forms of the disease. In one house the father and mother were both suffering from lead palsy, colic, constipation, absence of the knee-jerk. The mother had saturnine epilepsy. Two children, aged seven and nine years, had the dark blue lines: neither suffered from any symptoms calling for treatment. The water used for dietetic purposes by this family was largely polluted with lead. The chief symptoms of plumbism in children are constipation, colic, frontal headache, anæmia, absence of the knee-jerk—this is not constant. In one case it was excessive. There was only one severe case out of forty-two; this was a child aged four years. There was dark blue on the gums, severe colic, obstinate constipation, difficult and painful micturition, marked anæmia, tremor of the legs, which was followed by paresis and ultimately paralysis. The father was suffering from plumbism; he had colic, constipation, epileptic convulsions, loss of vision, paralysis of arms, paresis of legs. The mother of the child was also very ill, but had no lead palsy. On analysis the water supply contained  $1\frac{1}{2}$  grain of lead per gallon. Under treatment the child made a slow recovery. The symptoms of plumbism in children are usually so slight that they may be easily overlooked. Anæmia is the most common symptom, and is generally well-marked.—*British Medical Journal*.

### The Evolution of the Horse.

ON Saturday last Prof. Flower, F.R.S., commenced, at the Royal Institution, his course of lectures on "The Natural History of the Horse, and its Extinct and Existing Allies." The subject of the evolution of the horse has become one of great interest, not only because, being one of man's best friends, its descent is almost as interesting as "The Descent of Man," which Darwin has placed as a prominent problem, but because many years ago successive geological discoveries in North America raised the hope that its evolution might be traced. Prof. Huxley has, looking at what has already been found in American fossil remains, ventured on the prophecy that the evolution of the horse would be so far worked out as to be a sort of test case of the value of the Darwinian theory. The object of Prof. Flower's course is to show how the matter stands at present. Month by month news comes of the results of researches; but nothing yet has come to shake the view already taken. All is confirmatory. Prof. Flower commenced by drawing attention to that part of the vertebrate division of the animal kingdom known as "hoofed." The distinction, he said, which from form we draw between a hoof, a claw, and a nail is an arbitrary one; for they were all but forms of the same organ. A hoof, however, might be regarded as a sort of thimble. It was interesting to note that, with variations in the extremities of the limbs there was

a correlated differentiation in dentition. With the claw was the carnivorous tooth, with the hoof the herbivorous. In the hoofed horse the teeth were of herbivorous type—possibly omnivorous, but certainly not carnivorous. When Cuvier undertook the classification of animals, he had unfortunately made a jumble which it remained for Prof. (now Sir Richard) Owen to correct. Owen's distinction of the animals forming the group of which our horse is one, was into even-toed and odd-toed (artiodactylate and perissodactylate). The odd-toed had a curious geological history, of which the tapir, rhinoceros, and horse were the only living remainder. And though these three forms were now so widely different in appearance, there was ample evidence that they could be traced back to a common ancestor, and that was the fossil animal to which the name *phenacodus* had been given. There was proof, he said, that both the odd and even-toed group swarmed in early Eocene time, though now the even-toed—oxen, sheep, deer, camels, pigs, and hippopotamus—were mostly kept going by the influence of man; while of the odd-toed there were only the tapir and rhinoceros, besides the horse. About the common ancestor, as it was now accepted to be, the *phenacodus*, we were fortunately in a very different state of knowledge from what we were a year or two ago. Fossils, some in good condition, had been found—one especially good, which was, but for a few teeth, perfect. A drawing of this was shown, with another drawing of the bones as they must relatively have been when the animal was on its feet. The size of these animals varied, putting it roughly, from a terrier to a sheep. The Professor, in detail, drew attention to the bones of this *phenacodus*, which gave the peculiarities that had come through to the horse. But for the long-boned tail, there had been but slight change. The size of the lower jaw, the dentition, the limbs, and in short, every structure that was regarded as of importance was the same.—*English Mechanic*.

## MICROSCOPICAL AND LABORATORY GOSSIP.

WE have received the four following Microscopical queries from Mr. D. Caush, of Brighton:—

Will some of our practical microscopists tell me the best method of decalcifying natural teeth, so that I may be enabled to cut sections with a razor? Shall be glad of formulæ for solution and approximate length of time the teeth (roots) should remain in the solution. My desire is to obtain sections with the pericemental membrane in position.

Mr. G. G. Campion exhibited at Brighton some beautiful slides showing tubuli of dentine enlarged by decay and stained. Will some one kindly give method of preparing sections, stating if the sections are hard or decalcified, if the latter what solution is used, what stain and what media the sections are mounted in?

The same gentleman exhibited slides beautifully showing inter-

globular spaces in the dentine. I shall be glad to know best method of preparing sections to show the same. If sections are decalcified, please say what solution is used and what media the sections are mounted in.

Mr. J. J. Andrew exhibited at Brighton slides beautifully showing the development of the teeth. Will some one kindly give practical method of preparing such, mentioning how cut, stain and media mounted in ?

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THE *English Mechanic* for January 31 gives the following as a good *modus operandi* :—

PRINTING PHOTO. MOUNTS.—These are done with brass type and gold leaf in the following manner :—Tie up a small quantity of powdered shellac in a piece of fine muslin (in the same way as the domestic “blue bag”) ; dab this pad gently on the surface of the card so as to cover it with a thin coating of shellac ; now, with a sharp knife, cut the book of gold leaf into pieces of a suitable size, carefully strip off a piece of paper and take up the leaf with a piece of cotton-wool which has been moistened very slightly by drawing across the forehead, and lay it on the shellaced surface. Take the type, which has been so heated as to just slightly hiss when touched on a sponge saturated with water, and press firmly and evenly on the work. The heated type melts the shellac and sticks the gold, while excess of gold and shellac may be brushed or wiped away.—PRINCIPIA.

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INVENTION OF THE MICROSCOPE.—The third centenary of the invention of the microscope will be celebrated this year at Antwerp, where a historical exhibition of microscopes will be held and public demonstrations will be given of the structure of the instrument and of its development from its first beginnings to its present form.

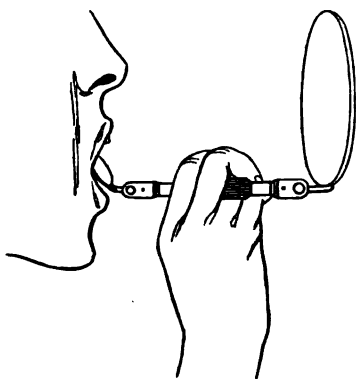
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USEFUL PLATE FOR HOLDING ODD PIN PLATE TEETH.—Cut a piece of linoleum floorcloth into three or four inches square. Before inserting the teeth slightly beat the linoleum and the pins will go in easily. I have found this method of fixing odd plate teeth much superior to wax or gutta percha and is more durable and cleanly. New teeth can be inserted in the place of those used. The very thickest cloth must be used, as the length of pin makes this necessary.

THE JOURNAL OF THE  
NEW INVENTIONS.

**The Dental Toilet Mirror.**

THE Dental Toilet Mirror, of which the accompanying is an illustration, is without doubt a capital idea, and Mr. Tice is to be congratulated on such a simple and useful invention. The lay public will be able by its means to discover early signs of commencing mischief that would otherwise have escaped their notice.



The drawing speaks for itself. The apparatus consists of an adjustable dental mirror at one end of a metal rod, and an adjustable mirror about three inches in diameter at the other.

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**ANNOTATIONS.**

OUR readers will notice that we have ventured to start a column of Laboratory and Microscopical Gossip. We trust that this effort to render the Journal of more general interest to the varied tastes of our readers will be supported. A column of this sort cannot be kept up by a few people, and of course, if the profession do not care to send items, the scheme will die a natural death.

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THE Fourth Ordinary Meeting of the Odonto-Chirurgical Society (Session 1889-90) was held in the rooms, 5, Lauriston Lane, Edinburgh, on Thursday, 13th February, at 8 p.m., Mr. J. Austen Biggs, L.D.S., President, in the chair. This meeting was

the " conversational " one of the session ; business discussion on Combination fillings, initiated by Dr. Williamson ; discussion on Antiseptics, introduced by Mr. G. W. Watson ; and Casual Communications.

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THE Venetian *fête* inaugurated at the Leinster Hall, Dublin, by the Marchioness of Londonderry last week, remained open until the 13th, when it closed with a subscription ball. The funds—as our readers are doubtless aware—are to be devoted to the Dental Hospital of Ireland. All the materials for the *fête* were of Irish manufacture, with the single exception of the artificial roses with which the Venetian masts were entwined. It was found that these could not be obtained in Ireland, and they had to be specially ordered in London. They were, however, manufactured out of Irish goods. The Duchess of Abercorn's stall had a background formed of two pictures of the Grand Canal, Venice. A bronze statue of Bacchus on this stall holds aloft a cluster of nine electric lights, which illuminate a quantity of antique plate, which form the prizes in the lottery, the drawing of which was advertised to take place last Saturday. Each stall had for background a picture of some Venetian scenes painted by a member of the Dublin Art Club.

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THE address presented to Lady Londonderry, on her opening the bazaar, was bound in figured Irish poplin of an old-fashioned design. Terra-cotta and old gold formed the principal colours of the decorations, and when lit up in the evening by electricity looked uncommonly well. Many of the ladies who sold at the stalls wore fancy costumes. On Tuesday, the 11th, a grand concert was held, at which the Lord-Lieutenant and Lady Zetland were present. In the evenings the fronts of the stalls were removed, so as to convert the latter into nooks where the dancers might rest or " sit out " at their ease. Liddell's band provided the music. Dublin has been pleasantly excited over the *fête*, which is expected to result in a substantial sum for the Dental Hospital.

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THE undoubted success which attended the whole affair must be attributed to the energy displayed by Messrs. Stack, Pearsall, and Murray, and no doubt many indefatigable subalterns. The Dublin Art Club have given their hearty co-operation and practical help. We wish we could have given more details, but the exigencies of time have rendered it impossible, seeing that the *fête* took place so near the date of publication.

**AN ARAB DENTIST.**—We quote the following from the *Palace Journal*.—"Sir Henry Layard, in his recently published 'Early Adventures,' says that on the occasion when in the desert he was suffering greatly from the toothache; and the sheikh having declared that there was a skilful dentist in the encampment, 'I made up my mind,' he says, 'to put myself in his hands rather than endure it any longer. He was accordingly sent for. He was a tall, muscular Arab. His instruments consisted of a short knife or razor, and a kind of iron awl. He bade me sit on the ground, and then took my head firmly between his knees. After cutting away the gums he applied the awl to the roots of the tooth, and, striking the other end of it with all his might, expected to see the tooth fly into the air. But it was a double one, and not to be removed by such means from the jaw. The awl slipped and made a severe wound in my palate. He insisted upon a second trial, declaring that he could not but succeed. But the only result was that he broke off a large piece of the tooth, and I had suffered sufficient agony to decline a third experiment.'"

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**LIVERPOOL DENTAL HOSPITAL.**—At a meeting of the committee of this hospital held at the institution, a resolution was unanimously passed on the motion of Mr. J. Wannop, seconded by Mr. M. Alexander, electing Sir James Poole to the office of chairman for the current year. Mr. W. H. Waite was appointed vice-chairman.

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WE notice in a medical contemporary that a Mr. Francis Fox has been delivering a lecture before the Medical Officers of School Association, on the subject of the "Care of the Teeth in Childhood." Judging from the abstract before us Mr. Fox's paper seems to have covered the subject well, and if no very original matter was laid before his audience we could scarcely expect that from a medical practitioner. It is satisfactory to find so vivid an interest in dental matters springing up in medical circles, for dentists have only been too long aware of the evils complained of, although painfully helpless in applying the remedy.

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**THE SALE OF POISONS.**—A case of great interest to chemists and druggists came before his Honour Judge Greenhow and a jury at the Leeds County Court on Wednesday, at the instance of the Pharmaceutical Society, to recover £15, the amount of penalties, under the Pharmacy Act, imposed upon Mr. J. W.



Law, chemist, York Road, Leeds. It was alleged that small quantities of opium had been sold at the defendant's shop on different occasions to three different persons. In defence, Mr. Law stated that he had instructed his servant not to sell it, and that if it had been sold it was in defiance of his orders. The jury were not satisfied that the laudanum had been sold on any occasion, and judgment was given accordingly.

THE medical profession in the provinces appear to be at times very careless in the selection of their dental confrères. It is a fact that a practitioner of our speciality, whose name is emblazoned on lay newspapers in huge advertisements, and whose portrait has, we believe, appeared as a scarcely veiled advertisement in the daily papers of his own town, and who, therefore, is quite outside the pale of reputable practice, receives, nevertheless, the support of medical men in his neighbourhood, and is elected to offices of responsibility by the votes and influence of medical men. Of the quack himself, it is of no use to say anything—his case is beyond treatment—but the medical men who aid and abet him may perhaps not all be beyond the reach of shame; at any rate, they are not beyond the reach of the licensing bodies whose diploma they hold. It is impossible to resist the suspicion that a pecuniary solatium has something to do with this forgetfulness of professional self-respect.

In a recent number of the *British Medical Journal* occurs the following curious item :—

COMBINATION OF M.B. AND CHEMIST.—M.B., C.M. writes : Having a decided objection to keeping a shop, I sublet to a chemist one which I had to take with a dwelling house. I now consult in the shop, and the chemist dispenses my prescriptions. One night recently a patient came in suffering from toothache. The chemist in my presence extracted the tooth and charged sixpence. I do not think this will tend to promote good feeling betwixt us, and I should like to know what position I should assume. No agreement has yet been signed. Should the chemist, for his own purposes, put a card in his window with the words, "teeth carefully extracted, 6d. each," or even "teeth carefully extracted?"

\* \* We may note that a more ill-advised arrangement than that he would appear to have entered into with the chemist could not,

in our opinion, well be. Moreover, to "consult in the shop," to quote his own expression, is highly derogatory to him as a medical practitioner, and cannot fail, in the eye of the public, to more or less associate him with the trade-business thereof. Further, to sanction by his presence the extraction of a tooth by the chemist in question—and for such a fee, moreover—was, we need scarcely add, something more than unwise. What, we are tempted to ask, is the profession coming to?

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**LIQUOR IODI DECOLORATUS.**—This is a solution of iodine which does not stain the skin. The iodine is in combination with an organic body, which renders it colourless, but at the same time the combination is so loose that a gentle heat, or even evaporation alone, under a glass over sulphuric acid, sets free the iodine. There can be no doubt of the superiority of this loose organic combination for purposes in which free iodine is required, compared with those decolourised solutions of iodine prepared with sodium hyposulphite or alkalis. The manufacturers of the *Liquor Iodi Decoloratus* are Messrs. Bewley and Draper (Limited), Dublin.

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*THE British Medical Journal* for January 25th contains the following curious case:—

**FOREIGN BODY IN THE AIR PASSAGES.**—Mr. Frederick Sleep, L.D.S. (Plymouth), writes: A patient for whom I had made some artificial teeth, whilst partaking of a dinner of rabbit-pie, six months ago, swallowed a bone during a fit of laughter. The convulsive struggle and subsequent quietude described made me suspect strongly that the body had passed into the trachea, and I advised her to consult forthwith a well-known surgeon. The next day I was told she had coughed it out through the nares.

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At a recent meeting of the Midland Medical Society Mr. William Thomas exhibited a patient who had suffered from necrosis of the lower jaw, probably after injury. The left half, including the ramus, condyle, and the alveolar process, containing many teeth, had been easily removed entire. In such cases he was strongly in favour of leaving the sequestrum until quite loose before attempting to remove it, and to keep the mouth as pure as possible by means of antiseptic lotions.

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WE copy the following from a contemporary for the benefit of those whom it may concern :—

**A DENTAL COACH AND HIS PUPIL.**—Jos. Abbott, dental surgeon, of 98, Queen Street, Exeter, sought to obtain from Aquilla Waterhouse, formerly of Ramsgate, now of Manningham Lane, Bradford, £10 and costs for professional and tutorial services. Mr. Macmaster represented the plaintiff, and Mr. Freeman appeared for the defendant. For the plaintiff it was alleged that an agreement was entered into between him and the defendant whereby he undertook to coach the defendant in preparation for the examination of a college of dentists, the defendant to pay him £10 on passing the "L.D.S." examination. The defendant, it was contended, had reaped all the advantages of the plaintiff's experience, but had failed to present himself for examination, and sought to get behind the agreement by declining to go up for examination. Defendant admitted in cross-examination that he had been going about the country enjoying himself, and had not felt equal to the examination. He asserted, however, that he had paid the plaintiff one sum of £10, and that he had not received the tuition he should receive for an additional sum of £10. The coaching was done by correspondence. His Honour held that the agreement was not binding, but considered that the plaintiff was entitled to some remuneration for his services, and assessed that at five guineas, certifying also for the plaintiff's travelling expenses from Exeter.

THE following is so unmatched in comicality that we cannot deny our readers so good an opportunity for a laugh. We copy it from *The Medical Press and Circular* :—

**THE INFLUENZA EPIDEMIC AND THE LAY PRESS.**—For some time during the past month many letters and articles on influenza, as well as interviews with the "leading medical men in the town," appeared in the Edinburgh newspapers. Much was written on the symptoms of the illness, and many were the letters published on its treatment, both preventative and curative. The following paragraph, which came out in the *Evening Dispatch* as the comments of one of its correspondents, has occasioned a considerable amount of amusement in medical circles : "There are a good many complicated cases occurring, such as intercostal neuralgias and severe head pains, but the most serious of those are where the throat symptoms are associated with, in the male, salpingitis, which necessitates either tracheotomy or hysterectomy. If hypospadias occurs, it may be well to give iron in large doses, but if a rupture

of a Graafian follicle supervenes, it may be serious, or even fatal. This last complication is believed to be due to an organism not belonging to the bacteria, but like them not containing chlorophyll." It is not often a newspaper is caught napping so completely.

NEW TEETH AT NINETY-EIGHT.—The *Evening News* reports that there has just died at Anglesey a woman, aged ninety-eight years, who had recently cut three new teeth, and was the mother of thirteen children. Her husband is still alive. The couple were married seventy-four years ago, and were the oldest married couple in the country.

It is stated that the Children's Hospital in Great Ormond Street has received a legacy of £60,000 and of £5,000 for the Building Fund. The erection of the new wing is to be commenced forthwith.

THE death of Dr. Gerhard, at the age of eighty-one, the senior member of the Faculty of Medicine of Paris, has just been announced. He is stated to have been in active practice to the end, and had been so for fifty-two years at Strasburg.

WE intend next month, space permitting, to reprint the report of the Hyderabad Commission in full, and thus enable our readers to consider the conclusions advanced in our leader this month side by side with the Report itself.

LAST month we printed wrongly the names of certain gentlemen among the appointments. We are, of course, at the mercy of the officials who send us the information, having no means of testing its correctness. The House Surgeons at the Dental Hospital of London should have been: T. A. Goard, L.D.S., Vernon Knowles, L.D.S., and J. A. Mallett, L.D.S.; Assistant House Surgeon, W. R. Barrett.

WE understand that Mr. E. Lloyd Williams has ceased to edit our contemporary, the *Dental Record*.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

### The Chiswick Inquest.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—This case may be interesting to your readers. I add some further particulars that the subjoined report may be more intelligible. The deceased (Mrs. Bryden, aged thirty-eight) is found dead, on her back

on the bed, with a portion of a night dress bag crammed in her mouth. The servant was away on leave to attend a funeral in Scotland. The denture is a large full upper, a very fine piece of continuous gum work, including palate, on platina, by Bowman-Macleod, of Edinburgh. It was not until some time after death, the teeth being discovered absent from the mouth were looked for in the throat. The medical evidence differed as to their exact position, also as to the immediate cause of death—suffocation or syncope—but ultimately agreed it was probably partly both, considering the state of the heart. In view of the medical evidence offered for their guidance the jury must be pardoned for forming an entirely unsubstantiated opinion of their own in the verdict returned of wilful murder by some person unknown.

I have good reason since to believe my report has met with the concurrence of Mr. Bond, F.R.C.S., and the Chief Commissioner, who will endeavour to disprove the police are to be credited in their statistics, of which they are proud, with an undiscovered murder.

"To SUPERINTENDENT HUNT.—DEAR SIR,—Obediently to your request I have heard the evidence in the inquest on Mrs. Bryden, and examined and measured the artificial teeth, which are unusually large in size, measuring two-and-a-half inches any way, except depth of palate one inch.

"Dr. Fountain said when he removed the night-dress bag from the mouth of the deceased he saw the artificial teeth in position, Dr. Dodsworth that the teeth were in the throat before death. This must be taken as proved by the blood on the teeth being coagulated, which could not occur after death. Dr. Ogilvie said the deceased accidentally swallowed the teeth and attempted to clear the throat by pushing them down with the night-dress bag. This theory is untenable, for I find it anatomically impossible by experiment and measurement on the dead subject for the denture to have lodged anywhere in the pharynx but that it could have been easily reached with the first finger.

"In the absence of evidence of or motive to crime it is inexplicable why the theory of suicide was not suggested.

"The evidence the deceased spoke to the constable of her nervousness in the empty house points to a state of mind that aggravated by drink would tempt her in a fit of hysterical drunken frenzied remorse at the lonely condition her habits had brought her to (it is in evidence her husband left her on account of such) to commit suicide by thrusting the night-dress bag into her mouth, which carried the denture into the pharynx."

Yours faithfully,

WALTER WHITEHOUSE.

8, The Sanctuary,  
Westminster Abbey, S.W.

## APPOINTMENTS.

At a meeting of the Poor Law Board held December, 1889, Mr. S. G. HUGO and Mr. G. J. HUGO were elected Dental Surgeons for the Town Hospital of St. Peter's Port, Guernsey.

MR. JAMES F. RYMER, M.R.C.S. and L.D.S.Eng., of Maidstone, has been appointed Honorary Dental Surgeon to the West Kent General Hospital.

R. GLEAVE-HULME, L.D.S.I., has been appointed Dental Surgeon to the City of London and East London Dispensary, 35, Wilson St., Finsbury, E.C., *vice* J. W. Elliott, M.R.C.S., L.D.S., resigned.

W. REGINALD ROBERTS, L.D.S., Hon. Assistant Dental Surgeon, Birmingham Dental Hospital, has been appointed Dental Surgeon to the Hammerwich and District Hospital.

ARTHUR TURNER, L.D.S.Ed., has been appointed Honorary Dental Surgeon to the Buckinghamshire General Infirmary.

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## ANSWERS TO CORRESPONDENTS.

L.D.S.ED. : Complains, with much justice, of the countenance given to an advertising "dentorium," by two surgeons of a County Infirmary, who, he is informed, are in the habit of giving anæsthetics at the said dentorium. It is a most unprofessional proceeding for any reputable practitioner to associate in practice with advertising dentists. The question was discussed a short time since in the *Lancet* and a strong opinion expressed disapproving of the practise.

DENS: Puts to us a case of a *locum tenens*, who, after a few months' service in that capacity, sets up close by in opposition practise, and asks whether this is contrary to etiquette, and whether he should be received by his fellow-practitioners. Such conduct can scarcely be called honourable, but the practitioner should have protected himself by an agreement. His reception by his fellow-practitioners must depend upon various circumstances upon which, from lack of information, we are unable to pronounce an opinion.

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NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

**SPECIAL NOTICE**—All communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 3.

MARCH 15, 1890.

VOL. XI.

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**Artificial Teeth for the Poor.**

SINCE our last issue a long contemplated scheme for providing dental appliances for the necessitous poor has been initiated with every prospect of ultimate success. Ever since the Dental Hospital of London has been in existence its controllers have been perplexed by a problem to which there seemed to be no reasonable solution. The institution has always afforded relief to the necessitous poor in the matter of dental operations of all sorts short of providing them with artificial teeth, but though the poor stand in undoubted need of such assistance, and the benevolent rich are presumably at least as ready to assist as in the case of fillings and extractions, and lastly, though the school would welcome any system that would provide them with an adequate machinery for instruction in all the surgical details involved in such work—

though, in short, the patients, the money, and the operators are all forthcoming, one, apparently insuperable, obstacle has so far rendered all suggested schemes unacceptable by the authorities, and this obstacle has been that no scheme has been suggested which did not seem to open the door to abuse, that shameful form of abuse which is always acting as a drag upon practical charity, namely, that those who reaped the benefit of the charity would be, to a large extent, those who could really pay a moderate fee to a deserving practitioner.

A sub-committee of the staff of the Dental Hospital of London have, after long and careful consideration, evolved a scheme which has been in substance accepted by the Committee of Management, and which promises to surmount this hitherto unsurmountable difficulty. The details of the scheme will no doubt be published when they have been thoroughly worked out; all we know at present is, that dental appliances are to be provided for the suffering poor, that the staff are to certify to the fact that the patient requires the assistance from a health point of view; and that the machinery for inquiry as to the inability of the recipient of the charity to pay a fee is if necessary to be established by the aid of some of the many societies of enquiry at present existing. We are naturally unable to anticipate the further labours of the sub-committee in the elaboration of details, but in their original proposals they have shown a strong sense of the necessity for strict investigation of each case on its merits, and their report suggests safeguards that will seem sufficient, unless experience shall point out some more effectual method.

The proposal must seem to all who have followed the history of the Dental Hospital to be one of the most momentous with which the governing body of that institu-



tion have ever had to deal, but we venture to say that no right-minded professional man can withhold his sympathy from the undertaking. The need for some such help is felt so strongly by the indigent poor and the benevolent, that the development of a workable scheme to deal with it is only a matter of time. At present the class of patients who would be reached by such relief have been, so far, compelled to suffer in silence, and we cannot help thinking that Dental Schools and Hospitals will do well for themselves and for the public in boldly tackling the matter. We cannot conceal from ourselves the fact that until recently Dental Hospitals have been supported mainly by the subscriptions of the members of the dental and medical professions, but now that the merits of dental charities are beginning to be recognised by the public generally we may fairly expect that this extension of usefulness will call forth an adequate response from the benevolent and charitable. The dental student will choose, or have chosen for him, the school that offers most facilities for teaching and no one can doubt that the teaching of mechanical dentistry, as at present carried on, is far from complete.

The sufferers, if there be any, by the introduction of this scheme, will be the unprincipled advertisers—the professional parasites who allure the poor into their clutches to rob them of their money, and leave them no return for their outlay, however small.

We wish well to the labours of those to whose lot it falls to work out this scheme in its details. We feel that it is a great revolution in hospital relief, and that if it is carried to a successful issue it may be remembered in after days as an important event in the history of dentistry.

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## ASSOCIATION INTELLIGENCE.

### Meeting of the Representative Board.

THE Representative Board met on Saturday, March 1. Mr. J. S. Turner in the chair. The following members of the Board were present :—Messrs. J. Ackery (London), Storer Bennett (London), J. T. Browne-Mason (Exeter), F. Canton (London), W. H. Coffin (London), J. Cornelius-Wheeler (Southsea), G. Cunningham (Cambridge), W. E. Harding (Shrewsbury), D. Hepburn (London), W. Hern (London), Morgan Hughes (Croydon), T. E. King (York), R. P. Lennox (Cambridge), H. B. Mason (Exeter), L. Matheson (London), J. C. Oliver (Cardiff), J. Lee Pike (Sheffield), H. C. Quinby (Liverpool), J. H. Redman (Brighton), T. Renshaw (Rochdale), William Rhodes (Cambridge), S. Lee Rymer (Croydon), S. Spokes (London), F. Weiss (London), C. West (London), E. Lloyd Williams (London), A. J. Woodhouse (London), and the Hon. Sec. (London).

Regrets for inability to attend were received from Drs. J. Smith and T. Stack and Messrs. T. Cooke Parsons, Hunt, B. MacLeod, W. Palethorpe and C. S. Tomes.

The following report from the Special Committee, appointed at the last Board meeting to consider and report on the best plan to be adopted with regard to the investigation of children's teeth in schools, was adopted :

"1. It being evident that, in order to render the investigation of any practical value, a uniform system of registration of the conditions observed should be adopted—such directions as appeared to be required by the end in view have been carefully prepared to be inserted into each book issued, along with a specimen page indicating the use of certain symbols and abbreviations.

"2. It appeared advisable to draw up a short explanatory letter, indicating broadly the scope and method of the proposed investigation, and pointing out the position which the British Dental Association holds with regard to it. Two brief letters have also been prepared which it is suggested may be made use of in obtaining permission for the inspection of schools. Finally, a private letter has been written, to be addressed to the Secretary of each Branch, the contents of which will explain themselves.

"It has been thought proper to include all these letters in the report. The detailed directions as to registration have not been included, as their meaning would not in all cases be clear without the book for which they are intended. Copies of the book containing the said directions will be ready for the inspection of Members at the next Board Meeting.

"In conclusion, your Committee beg to submit the following resolution, to be proposed at the forthcoming meeting of the Board :—

"That a Committee be appointed to continue and to conduct the collective investigation as to the teeth of school children, and to finally report thereon to the Representative Board."

"(Signed) GEO. CUNNINGHAM.

"W. HERN.

"SYDNEY SPOKES.

"L. MATHESON."

The following gentlemen were elected to form a Collective Investigation Committee, to carry out the scheme and report to a future meeting of the Board the result of the inquiry:—Messrs. Cunningham, Fisher, Hern, Matheson, Spokes and E. Lloyd Williams.

A letter received from Dr. Smith, Edinburgh, was read and referred to the Committee.

The PRESIDENT stated that the Business Committee had very carefully considered the letters and resolutions of Dr. Rentoul, of Liverpool, with regard to the formation of a Public Medical Service, and it was of opinion that at present it was unwise for the Association to take any action in the matter.

The resolution of which Mr. W. H. Coffin had given notice was considered, and Mr. Coffin decided to withdraw it until the standing orders were considered, when he would call attention to the standing order relating to the formation of the Business Committee.

The HON. TREASURER reported the balance at the bank to be £737 os. 6d., and that 604 members had not yet paid their subscriptions.

The Annual Report of the Journal and Finance Committee was submitted to the meeting and adopted. On the next page will be found the annual balance sheet.

Mr. J. G. OLIVER proposed the resolution of which he had given notice, viz., "That the Board, believing that a wide and general dissemination of knowledge in relation to the teeth and their preservation would be of incalculable advantage to the community and to the profession, conducing to a general adoption of conservative measures for the preservation of the teeth, are of opinion that this end can be best promoted through the Association providing an educational code for public use." This resolution was seconded by Mr. QUINBY.

Letters were read from Sir John and Mr. C. S. Tomes and Dr. John Smith. After an exhaustive discussion the motion was lost by a large majority.

The following resolution was submitted to the Board from the Business Committee:—"That the opinion of the Representative Board be sought as to the desirability of Branches of the Association issuing circulars for distribution to the public without bringing the same before the Board."

The question having been discussed, it was decided that such a course on the part of branches was inadvisable.

# THE BRITISH DENTAL ASSOCIATION.

*Receipts and Expenses Account for the year ended 31st December, 1889.*

Dr.

<i>General Account.</i>		£	s.	d.	£	s.	d.	£	s.	d.	Cr.
To Rent ...	...	30	0	0	...	...	...	779	13	8	
" Secretary—Salary ...	...	50	0	0	...	...	...	...	...	...	
" Stationery and Printing ...	...	81	0	5	...	...	...	259	17	11	
" Postages and Sundries ...	...	59	15	4	...	...	...	...	...	...	
" Expenses of Annual Meeting ...	...	99	10	11	...	...	...	...	...	...	
" Audit ...	...	5	5	0	...	...	...	37	0	0	
" Legal Expenses ...	...	134	15	9	...	...	...	296	17	11	
<i>Association Journal Account.</i>		460			7			5			
" Printing and Publishing ...	...	475	14	9	...	...	...	259	17	11	
" Salaries, Reporting, &c. ...	...	150	3	8	...	...	...	55	10	5	
		625			18			5			
		£1086			5			1086			
<i>General Account.</i>		...			...			...			
By Subscriptions ...	...	...			...			...			
Less Amount credited to " Association Journal" Account below	...	...			...			...			
Less Amount carried to reduction of Goodwill Asset ...	...	...			...			...			
		37			0			296			
		482			15			9			
<i>Association Journal Account.</i>		...			...			...			
" Subscriptions as above ...	...	...			...			...			
" Sale of Copies of Journal ...	...	...			...			...			
" Advertisements ...	...	...			...			...			
" Deficit carried down ...	...	...			...			...			
		603			10			0			
		0			0			0			
		£1086			5			1086			

# THE BRITISH DENTAL ASSOCIATION.

*Balance Sheet. 1st January, 1890.*

Dr.

To Balance from last Account	...	810	2	2	By Cash in hand and at Bankers	...	604	11	5
„ Less Deficit brought down	...	0	0	1	„ Goodwill of Journal, from last Account	...	200	0	0
		<hr/>			Less Amount brought down to reduce this Amount	...	37	0	0
		<hr/>					<hr/>		
		<hr/>			„ Messrs. J. & A. Churchill—Balance due...		163	0	0
		<hr/>					42	10	8
		<hr/>					<hr/>		
		<hr/>					£810	2	1

Examined and compared with the Books and Vouchers, and found correct,

22nd February, 1890.

J. W. BUTCHER, Accountant and Auditor.

The HON. SECRETARY reported that satisfactory progress had been made with regard to several cases of irregular practice, which the Business Committee had under consideration.

Mr. BROWNE MASON made a statement with regard to the arrangements for the Annual Meeting, which he announced were in a forward condition.

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### Benevolent Fund.

THE Treasurer of the Benevolent Fund of the British Dental Association regrets that the following errors were made in the list of Contributors for 1889, recently published :—R. M. Hatch, Claremont House, Clifton, Bristol, Subscription one guinea, *should be* Subscription (for 1888-89) two guineas ; J. Lee Pike, 273, Glossop Road, Sheffield, Subscription one guinea, *omitted*.

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## ORIGINAL COMMUNICATIONS.

### The Work of the Odontological Society.

*The substance of a Valedictory Address delivered by the President,  
HENRY SEWILL, at the Annual Meeting, January 13th.*

AFTER some introductory remarks, Mr. Sewill said it had been the custom for the President of this Society to deliver a valedictory address ; possibly it was a custom which at some future time might be more honoured in the breach than the observance, one of the most distinguished Presidents within late years having dispensed with the formality. Instead of retiring in silence—a silence which might be, perhaps, misconstrued—he should like to give an *apologia* for his period of office : to take stock of the year's progress, and in this if he could not adorn a tale he might yet be able perhaps to point a moral.

They had heard from the officers the general condition of the Society ; their library was an extremely good one, the Museum was excellent—perhaps the best dental museum in existence ; the financial position of the Society was good ; there was only one complaint to make, viz., as to the smallness of their numbers ; they barely maintained their roll, the deaths and new elections giving only one member to the good. It seemed strange that members of the profession did not join their Society and the British Dental Association in numbers such as might be expected.

During the year they regretted to have to record the loss of several members, some young, some full of years; among them Matthew Finlayson of Edinburgh, M. Brasseur of Paris, Dr. J. W. Langmore, an honorary member, Mr. Palmer of Peterboro', Mr. Charles Spence Bate, F.R.S., of Plymouth. Most of these members had had obituary notices in the journals and he need not attempt to add to these. Mr. Spence Bate must undoubtedly be looked upon as the most distinguished; he was one of the few members of their profession who held the blue ribbon of science, the Fellowship of the Royal Society. His work lay far out of dental science, for his name would be chiefly associated with entomology, which he enriched by his observations and researches. Mr. Spence Bate's work admirably illustrated the essential unity and solidarity of science. Nothing in the vast range of nature is so insignificant as to be unworthy of the attention of the investigator. If it is impossible to establish a fact concerning even the least important portion of the organism of the humblest beetle that crawls, without adding to the mass of evidence certain to be used again by future investigators, and without that fact—if really a fact—ultimately falling into its proper place in the gradual unfolding of nature's plan as an integral factor in the sum of knowledge on which progress depends. Spence Bate's facts had in truth been already used by Darwin in support of important arguments. With regard to Mr. Spence Bate's personal character, the President thought he could not do better than quote from a letter from Sir John Tomes in which (speaking of Spence Bate) he said "I regarded him as a thoroughly good fellow." Now what better could members pray for than that when the time came for their epitaphs to be written it could be said of each of them by so discerning a judge of character as Sir John Tomes "He was a thoroughly good fellow."

The Odontological Society was a scientific society, and the question was what had they done during the year to advance or contribute to science? They had listened to a great number of contributions from members; the time of each meeting had been fully occupied, and the papers had extended over the whole range of subjects connected with their profession. Antisepticism in dental surgery was ably dealt with by Mr. R. H. Woodhouse. Mr. Amos Kirby had given them the advantage of his experience on the subject of electricity in connection with dentistry. Mr. Hepburn's papers treated upon useful and practical subjects, and

from Dr. Cunningham they had the fragment of what promised to be an interesting and new research, viz., the occurrence of a crystal forming micro-organism in the mouth; unfortunately want of time deprived them of the opportunity of hearing the whole of the paper, but they hoped to do so at some future time. They had also had a number of useful *Casual Communications*, and the Curator, Mr. Storer Bennett's descriptions of the contributions to the museum, though they were often passed over without discussion, always contained interesting facts, and exhibited knowledge which they highly appreciated.

With reference to the papers of non-members and visitors, it was, he thought, a thing to be proud of that the Odontological Society had for many years attracted contributions from the very foremost men of science. This year they had had a paper from Mr. Jonathan Hutchinson, who stood in the very front rank of philosophical surgeons—among the men who having mastered almost the whole range of biological science, brought their vast store of knowledge directed by philosophical intelligence to bear upon the solution of pathological and surgical problems. His paper was a very valuable one, but it was not very fully discussed; minor points were seized upon and more important ones were passed over. Mr. Hutchinson mentioned that he had observed in some few cases ulceration of the tongue and mucous membrane in mouths where many amalgam fillings were present. There could be no doubt of the correctness of the observation, but Mr. Hutchinson by no means implied that he placed amalgam fillings and ulceration in relation as cause and effect. As a result of the vast number of observations on syphilitic and mercurial or stomatitic teeth—observations summarised in the paper—which he had made, he gave them a fact, for the first time published, viz., that patients with “honeycombed” teeth are frequently more susceptible to the action of mercury than others. This fact tended to confirm the opinion that stomatitis due to mercury was a cause of the “honeycombing”; the inference being that the infants affected were those most highly susceptible to the action of the drug. Alluding to Mr. Bland Sutton's highly interesting and valuable contributions, the President remarked upon the distinguished and leading position which Mr. Sutton had attained though still quite a young man. Mr. Sewill next referred to Dr. Ferrier's paper, which, he said, handled an extremely complex subject in a most lucid and incisive manner. There was one

suggestive point made for the first time clear and to which importance should be attached, viz., the possible relation, in many cases, of facial neuralgia and visceral disease, and *vice versâ*. Dr. Semon in an unassuming, but very able way, had collated the various authorities on Empyema of the Antrum, making his paper one of great usefulness.

With reference to the presence from time to time of eminent scientists, the point which he wished to bring home to them was this, seeing the reputation the Odontological Society had attained as a scientific society, they should very carefully guard against opening the door to those whose scientific competence was at all in question, or those who might be willing to use the society for personal and ambitious ends.

It was quite evident that no society of a limited speciality like dentistry, or even the wider sphere of surgery, could go on for ever discussing the procedures and incidents of everyday practice, therefore if such societies were to exist, they must go further afield to the basis of science; though they ought not to forget the practical, still they must go to science and widely to science, if they were to fill their meetings and take their proper share in the scientific work of the day. While, however, they went to the foundation of things, they should remember that subjects not germane to their speciality were outside their province. It was not difficult to give illustrations of what he meant, for instance they might discuss a tumour of the brain involving the origin of the fifth nerve, but they could not, nevertheless, with propriety discuss the etiology and pathology of every form of cerebral tumour. It was right to deal with the circulation of the blood as circulating through the dental pulp and periosteum, but they ought not, for example, to wander off to discuss the peculiarities of the circulation in certain forms of heart disease—a digression of a kind which was not at all uncommon at certain dental societies. Mr. Sewill further instanced a discussion which some time ago took place at a Society meeting several thousand miles away from Leicester Square. The subject was the teeth as organs of speech—from this the members wandered to the physiology of speech; from that they passed to the psychology of speech and thence to the metaphysics of language. In the end they seemed lost in a cloud of meaningless verbiage so that one almost came to regret that language should have ever been invented to lead a party of sober minded dentists to render



themselves for once supremely ridiculous. With regard to criticism, he was bound to say they were not quite what they should be, and here he would like to lecture the younger members but that he had hardly attained the age which conferred the privilege to do so. He did not think the younger members did their duty in the matter of criticism. The excuse was often made that a subject was new, and they could not discuss it, but he did not know that that was always a valid excuse; there were always fundamental facts of science with which the youngest should be acquainted and upon which questions might be based or information elicited. No really scientific man was afraid of criticism, on the contrary he desired it; criticism need not be bitter or personal, it could always be courteous, but it should be free and fearless, and so far as the reputation of the Odontological Society was concerned the more thoroughly they attacked papers in the proper spirit the better would be their success in drawing the best men to them. Scientific men would always go where they could get the best criticism, and therefore, he would repeat, if they wanted to sustain and enhance the reputation of the Society as a scientific body they must be sharp in their criticism. He was addressing himself to the younger members—the older men naturally hesitated to show their wisdom—and he trusted they would improve the critical element and so help forward the reputation of the Society and of the profession. It must be remembered that the reputation of a profession was the aggregate reputation of its individual members, and he would urge young men while they were yet young to cultivate a taste for, and interest in, science. The President expressed regret that he could not emphasise his advice by reference to scientific achievement of his own, but he was sure that the happiness derived from self-sacrificing work could often be most truly recognised by those who had performed nothing, but had observed the more useful careers and happier lives of those whose example they—to their bitter regret—had not emulated. The only hope for a man practising in any branch of surgery, dealing with human weakness and human suffering and human vanity lay in cultivation of a philosophic mind; and that could only be done while he was young. If he came into the profession with the determination only to make money, the profession had very little to give in that way, and when he reached the age when disappointments of life came upon him he would find he

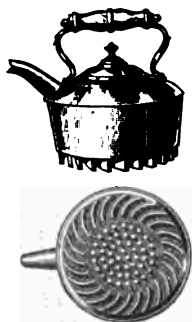
had neither wealth nor the satisfaction of having done good. Therefore if he had any eloquence he would use it in impressing upon their younger members the value, from the moral point of view, of cultivating the truly scientific spirit.

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### Coal Gas in the Laboratory.

By T. FLETCHER, F.C.S.

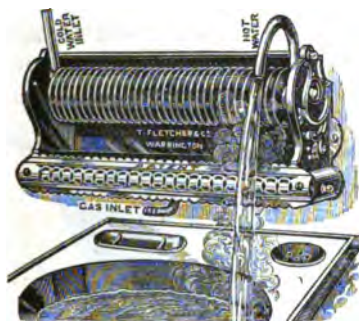
TAKING the uses of coal gas in systematic order, we commence with the supply of hot water for taking impressions other than plaster, and we must take into consideration the fact that the general demand for hot water in the laboratory is very irregular, and the required temperatures vary greatly. The various requirements can be supplied, provided a reserve of boiling water is always at hand, but this is not only an unnecessarily expensive luxury, but there is a liability to intervals when no boiling water can be obtained.



I do not consider the many forms of water-heaters in which a supply of several gallons of boiling water can be kept automatically boiling, as they are excessively wasteful of gas and cause a constant steam in the laboratory.

We may take it that only two forms of apparatus will fill the requirements, the least satisfactory of the two being a rapid boiling kettle, the bottom of which is covered with solid studs. This will do the required work, but it entails some minutes waiting, often at inconvenient times.

The other so completely fills all requirements that we need look no further. It is a small horizontal water-heater, which can be connected to the ordinary water service, and which will give in a few seconds after lighting the gas, a steady stream of water at any temperature required, from lukewarm to boiling, depending on the speed at which the water passes through the apparatus.



This covers not only the softening of the modelling composition or wax, but also the next stage, *i.e.*, removing the composition from the plaster.



Drying models is the next process, and for this we take one of the laboratory burners with the upper cylinder in position. This, with the gas turned to its lowest point, gives a steady current of warm air surrounding the plaster, which rapidly and safely dries over the flame. The same burner, with the cylinder removed, is

useful for heating either alum solution, resin mixture, or any other composition used to harden the plaster.

Casting dies may be now considered, and here comes in the ladle furnace for zinc melting. This will melt seven pounds of zinc or alloy in about fifteen minutes, giving time to prepare the sand moulds. When the zinc gets thick and unsatisfactory the same ladle furnace is used to heat it to dull redness, when a tablespoonful of strong hydrochloric acid thrown on it whilst stirring with a stick or an iron rod will instantly render the zinc perfectly fluid and equal to new metal.



Lead or tin for counter dies can be prepared with the same furnace in about eight minutes, or less ; and this brings us to the treatment of the plate. On this subject much may be said with advantage, and I will consider the question of plate bands separately. Plate is usually made from cuttings, sovereigns, and any necessary alloy. How simple a matter this is I will show you by melting and pouring in two or three minutes a 3-oz. ingot in the blowpipe ingot mould. The scrap, of course, is boiled in nitric acid before melting, using an enamelled iron cup or bowl, and for this the laboratory burner is again used, without the cylinder. Bands entail a little more time and trouble. We take the filings and boil them in an enamelled cup in about three times their weight of strong nitric acid until about half the acid is evaporated, stirring occasionally with a glass rod to ensure the whole of the filings being acted upon by the acid. They are then thoroughly and repeatedly washed with boiling water until perfectly clean ; the washings from this will go into the bench sweep,

and the cleaned filings must be put in a crucible and melted in the injector furnace into a button, which, when set, is again melted in the blowpipe ingot mould, and made into an ingot. This ingot contains not only filings of gold, but platinum pins, and the resulting plate is hard, elastic, and singularly well suited for bands and springs. The boiling down is not a sweet opera-



tion, and must be done under a chimney or a stench closet, and, failing these, out of doors. Mr. Taylor has kindly prepared some of his filings, which I will now melt into a button in the furnace. I will not waste your time by showing you again the process of making an ingot, but you may take it for granted that this button will roll into a sound perfect plate without the slightest doubt, if my own and Mr. Taylor's experience for many years may be taken as a guide. If a large proportion of platinum is contained in the filings it may be advisable to add about one-fourth of 22-carat gold or soft plate scrap to prevent excessive hardness.

Whilst on this subject, I may call your attention to the flattening mills which Mr. Taylor has troubled to send for your inspection, and these mills have a history.

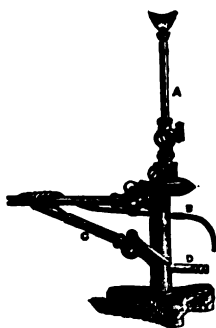
Twenty-six years ago these mills were made for me by Messrs. Thewlis and Griffiths, of Warrington. You will note that on one side is a ratchet handle; and on the other a four-armed fixed handle, they require no screwing down, and one man can, without very hard work, reduce a 3-oz. ingot to No. 7-plate gauge in ten minutes, including the time required for annealing.

After these mills had been in use for two or three years, the rollers, with the heavy compression, became slightly untrue, and

they were re-ground at a small cost. I may safely say that for twenty years after, they remained absolutely true, and that a twenty-yard length of pattern lead could be rolled out without a break.



Speaking of pattern lead reminds me that it is better to buy sheet lead  $\frac{1}{8}$ -in. thick and roll it out; after rolling too much care cannot be exercised in thoroughly and perfectly cleaning the rollers. I need not distress your minds by the memory of a trace of lead in your gold; the subject is too painful to dwell on.



Dental alloy is used, and the scrap, so far as my knowledge goes, is a nuisance. I never succeeded in melting it properly and making a satisfactory plate. If anyone can tell me how to do it I shall be very pleased to know that someone has had more skill in this matter than myself.

Having prepared our pattern lead, plate, and band gold, we come to striking up, and the annealing of the plate is done with a blowpipe.

Blowpipes are a tender subject ; it matters little how bad a blowpipe is, if its user knows it well and can do good work with it ; give him one a hundred times better, and he will probably fail to do decent work with it until he has had experience and spoilt something. Speaking for myself, I consider the hot blast blowpipe with bench light the most perfect apparatus for dental work. Many will agree with me, many will not, and I leave the matter open for each to use the blowpipe he can do the best work with. Some little disturbance has been made by the proposal to use compressed nitrous-oxide for blowpipe work ; this, in my opinion, is a serious mistake. The ordinary blowpipe has ample power for any possible requirements, with the advantage of simplicity and low cost in use, and you all know the care required even with the ordinary blowpipe to prevent fracture of the mineral teeth or fusion of pins. If anything of the kind is at all desirable we may safely take the compressed oxygen blowpipe in preference, the gas being less than one-fourth the cost, and fully twice as powerful for blowpipe work. If we need the extra power it can be got cheaply by the use of compressed oxygen. My contention is that it is totally unnecessary, and is distinctly risky in use.

Before soldering, however, we have to get our cases in the loam and dry them. Once more comes in the laboratory burner without the upper cylinder, and I have here a new little appliance

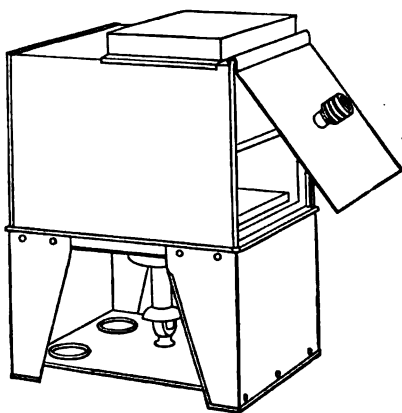


which is useful in getting up heats for soldering. It is simply a little dome of porous fireclay, with a handle, and is used as a cover for the work on the burner ; it assists so greatly that little labour is needed to get up the final heat for soldering.

**VULCANISING.**—In this work we have great need for coal gas as a fuel, our wax sheets need warm water for rolling and softening, and on this point one important matter may be mentioned. When wax has been used for a time it becomes dirty and unsatisfactory to use; the dirty wax should be placed in a bowl with an equal bulk of water, and the whole heated until the water boils. If this is allowed to stand until cold the contents of the bowl separate into three layers, clean wax at the top, the dirt in an adhering layer under it, and the water at the bottom; the dirt can be cut off the wax, and this can then be softened and rolled out on a wet slab into sheets.

A small gas flame is used in building up the wax, and after the work is in the flask this can be warmed by the same apparatus used for drying models, or in a special oven I shall refer to presently. When the flask is parted the wax can be perfectly washed away by a small stream of boiling water from the instantaneous water heater.

Packing the rubber comes next, and for this we need to dry and heat the flask. This is best done in a small water-jacketed oven,



such as I have here, placed on the boiling part of the laboratory burner, or with a separate burner of its own. With regard to this oven, I may say that the first was made by Mr. Planck and myself some thirty years ago. Neither of us knew much about tinman's work, and the result was a most disgraceful affair, not fit to be seen, but it lasted for about twenty years, when it was re-



placed after a long service by a decently made one, which is now used by Mr. Planck, and which, I think, will be good for at least another twenty years.

▲The use of gas for the vulcaniser needs no remarks; it is well known to all, and the use of Gartrell's regulator simplifies matters very much. Speaking of regulators reminds me of old times. Mr. Planck and myself evolved out of our inner consciousness the first regulator for vulcanisers ever used, which worked by the expansion of mercury, and we used an old American alarm clock to turn the gas out at the proper time. I think I am safe in saying that a second edition of this regulator is still in use in Mr. Planck's laboratory, and is yet doing its work well. All of us have time to spare for experiments when we commence work, and the old times when Mr. Planck and myself were wasting (or using) our time experimenting are times to look back on with pleasure. I hope Mr. Planck will forgive me bringing him forward and exposing his weakness for everlasting experiments, but I may safely say that the time was not wasted, and that some good result has come out of our joint labours, which were not always expended on purely dental matters.

Coming back to more recent times, there has been a wave of demand for continuous gum work, and several special furnaces have been made and sold for this purpose. My own experience in this work is very limited, but the general opinion of those who do good work appears to tend in the direction of large muffles and slow firing. I remember seeing years ago, in the laboratory of Mr. J. Smith Turner, a very fine and perfect sample of this work which had been fired in one of my own No. 4 muffle furnaces with draught burner. I myself failed to fuse the work properly in the same furnace with Warrington gas, and it is a well-known fact that furnaces vary greatly in their performance with different samples of gas as supplied in different towns. There is no doubt the rule is that a supply of air or oxygen under pressure is necessary for satisfactory results in continuous gum work, and I have here the first furnace made for continuous gum, using the Brin Company's compressed oxygen. In this furnace any temperature, without limit, can be obtained with the greatest ease and certainty; it requires no attention whatever, and will run on for hours or days with absolute steadiness of heat. The cost of the oxygen, at full power, will be between 1s. and 1s. 6d. per hour; this is not important in the face of the fact that the apparatus requires no attention and is

absolutely reliable up to any power which can possibly be required.

Leaving the laboratory there is one matter of the utmost importance for comfort and convenience, the use of a gas fire in the waiting and operating rooms; a coal fire is a dirty nuisance, always wanting attention at the most inconvenient times, and very irregular and unreliable. At least one-half the mess and trouble in these rooms is caused by the use of coal fires, and those who had once adopted the use of gas for this purpose would never return to the old system. For both operating and waiting rooms the best possible arrangement is an open incandescent gas fire with a warm air arrangement; these need no special fixing, and can be placed in front of any ordinary coal fire grate with perfectly satisfactory results, both as to work and appearance. An expenditure of about 50s. per annum will make a small operating or waiting room comfortable, without any trouble or dirt, and I may ask Mr. Taylor to relate his experience on this point.

In conclusion, I must express my pleasure that, although I have deserted the profession for the last fifteen years, I feel that I am not quite forgotten, and that I am as much at home amongst you as if my desertion had not taken place.

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### The Care of the First Permanent Molar, Especially in its Relationships to the Other Teeth.\*

By OSWALD FERGUS, D.D.S., L.D.S.

I THINK, sir, it is quite unnecessary for me to tender any apology for bringing this subject before our branch, as it is one in which we all take an interest, none the less so that the varying circumstances to be met with indicate a variety of interference ranging from the most careful and systematic preservation down to a comparatively early removal of the dental organ in question. I confess that the matter in hand interests me personally in no small degree, and the frequency with which the problem is brought before me only stimulates the desire to have the succeeding treatment or non-treatment placed upon a rational and, so far as is possible, a scientific basis.

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\* Read at a meeting of the West of Scotland Branch, Glasgow, February 27th, 1890.

Roughly speaking, the first permanent molar makes its appearance at the sixth year of life, a statement which must be largely qualified by exceptions, as instances are not infrequent in which it has shown itself considerably earlier; and, on the other hand, the eruption is delayed sometimes so long as to give rise to the belief that it must have been lost by caries in early life, and not recognised by the patient or his guardians. Though called a permanent tooth, in some of its characteristics it is allied but too closely to the members of the deciduous group, more particularly in its loosely arranged tissues; and this, coupled with a frequent imperfection of the coronal enamel, renders its existence often precarious, if not brief. Regarding such imperfections in the protecting structure, they should, of course, be attended to at once, and here let me say that in an overwhelmingly large majority of cases such defects should be repaired with a plastic material, and I give copper amalgam preference over all others. Few patients at this early age have the required moral courage to submit to the restoration being carried out with gold, and even if they had, the inferior reagent becomes the superior, having in it certain preservative qualities which the royal metal is wanting in. Such an amalgam filling had, I think, better be left untouched till the fifteenth or sixteenth year, by which time the organ will have assumed a better state of internal development, and the time thus allowed to pass has been more than ample to allow of a very fair conclusion being come at regarding the position of the tooth, not only with the second bicuspid and the second permanent molar, but with the series in general. Other considerations being normal, the amalgam may then easily be removed and a gold filling substituted without running the risks that would have had to have been encountered had that treatment been adopted at the earlier stage.

But it is not only from imperfections in its own enamel that the life and utility of the organ under discussion is endangered. Good manners being corrupted by evil communications finds a too true fulfilment, and a recognition of this should only tend to make us more and more careful that the evil be kept as far away as possible. At a very early date in our professional career we became alive to the fact that the second deciduous molar often plays a most important part in the life history of its more permanent fellow. Contact, the one with the other, brings about the condition which lead up to the phenomena of dental caries, and while the weaker goes the more rapidly to the wall, it revenges

itself by leaving traces, often, alas ! not inconsiderable, upon its more robust companion. To prevent this most undesirable calamity, I think we are justified in adopting expectant treatment, a course which I have never yet seen any reason to regret, though at times one meets with considerable opposition from patients whose tender years form an excuse for their want of reason. To carry out such preventive measures, on the appearance of the crown of the permanent tooth, the distal surface of the temporary one may be sacrificed to the extent that will render contact impossible, as the not very distant shedding of the latter renders its existence a matter of comparatively little moment. Should, however, the undesirable result indicated have taken place, *i.e.*, should caries have shown itself in one or both of the opposing surfaces, we may be called upon to fill the cavities, and in doing so it will be well to leave the work so finished that in no part does tooth structure impinge upon tooth structure, but either that amalgam meets amalgam by a process of contouring that cannot be too carefully and completely carried out, or, by leaving a clear space between the filled surfaces, gained, of course, at the expense of the shorter-lived member.

Regarding still the mesial aspect of this molar, we are met with certain considerations of moment when the temporary one gives place in the course of natural sequence to the second bicuspid. Granted that no irregularity is present, the matter is not one that presents any very special difficulty, provided the molar tooth is healthy on the surface upon which impingement will occur, but should the temporary predecessor have affected the first molar, it in turn will communicate the disease to the bicuspid, and in mouths that do not receive regular and systematic attention one can readily conceive that the evil may be a very wide spread one —indeed, it is often difficult not to exaggerate the results of so trifling a beginning.

On the appearance of the second permanent molar about the thirteenth year of life, certain very important problems have to be settled, for then it is that the fate of the first molar trembles most in the balance. Where, as in some mouths, there is a clear space between each tooth, our doubts are happily laid to rest at once, but the closer the approximation, even where the teeth are regularly arranged in the mouth, the greater become the risks incident to overcrowding. Still, for my own part, I am reluctant to remove an organ that is from its great masticatory surface, of the highest

service, and one which has, as it were, become in the six or seven years of its life the more able to withstand the effects of the evils that surround it. Nay, more, any careful observer will have noticed that such removal will, in the majority of cases, have altered more or less the natural articulation, a factor in the production of pathological changes which, alas, does not receive the amount of attention which it perhaps deserves. Even where the ravages of decay have left their traces, I prefer, when the tooth cannot be properly filled, to patch with amalgam the enfeebled organ until the time has arrived when the adaptation of an all gold or other crown will restore to usefulness the seriously impaired utility of a member whose use is such that it should not be heedlessly ignored, and which, were it removed, might probably cause serious derangement to a large number of the series.

I have attempted to sketch, and but merely to sketch, the conditions under their favourable aspects ; it yet remains to say a few words regarding the fate of the first molar when circumstances are present that render its removal possibly expedient, or absolutely urgent. In this latter category I would instance where the crown of the second molar strikes angularly against the neck of its more anterior neighbour in such a way as to impede or prevent its proper eruption. This incident is happily much more rare than in the case of the wisdom tooth, and the treatment is the same in both cases, viz., the speedy removal of the tooth against which the crown of the new comer rests an interference, which is followed by a rapid forward movement into place of the offender.

Similarly, too, I have extracted, with good results, a first molar where the second molar was developed so far out of position as to be a source of considerable irritation to the buccal mucous membrane, and which did not seem inclined to slip backwards, where it might have found more room. This class of case must be judged individually upon the merits at issue, for I can more than conceive that the second molar itself in some instances should be sacrificed, especially if showing signs of marked developmental insufficiency.

Leaving these considerations, we must turn our attention to cases in which a considerable margin of doubt remains as to what should be done, and in this category we are brought at once face to face with the question of removing the first molar tooth in cases of irregular arrangement for purposes of gaining space so as to properly adapt the remaining organs to their altered conditions. At times no other interference is required than can be met in the

use of forceps, and from this simple operation we have an exhibition of dexterity on the one hand and endurance on the other, till sometimes one is inclined to wonder whether ingenuity or patience will ultimately triumph. I think that in the large majority of cases where a member has to be lost to make way for the others the choice may with advantage rest upon the tooth in question, but even then the greatest care will have to be taken that a proper articulation is maintained. Not long ago I was shown a mouth in which the upper teeth had been deranged more than their opponents, or at least the irregularity there had been a greater eyesore to the patient and friends. A Coffin or other expansion plate had been introduced, and the upper teeth had been reduced to so far a state of order as to give satisfaction to all concerned. The improvement was a marked one till the two rows were brought into approximation, when a little careful examination showed that the articulation had been seriously impaired so as to almost deprive the different classes of teeth of their special functions, and worn cusps and slowly twisting roots left in my own mind the question how far an improvement had after all been made. I have nothing more removed from my intention at this moment than to deprecate the correction of inequality by any known method or combination of methods ; all I wish to point out by the above case is that an apparent improvement does not of necessity imply an actual one, and that therefore, before we remove any tooth or teeth, we should have given some heed to the ultimate as well as the immediate results.

I wish, gentlemen, that we could awaken the general public, and for that matter of it, general practitioners, to the importance of this first permanent molar. How often are children brought to us with it hopelessly decayed, and the exasperating extenuation offered, "Oh, I thought it was one of the first teeth !" showing how little the parents of even large families learn by an experience which is said to be the education of even the foolish. Developed at a time when rapid structural and developmental changes are taking place, it can only be the unthinking who do not regard it as a special provision of nature to meet an increasing want, and that its loss will entail impoverishment in a system that is being laid for life.

To sum up, then, so important an organ should, in the great majority of cases, be preserved not only for its own sake but on account of the beneficial action its presence exercises more or less

upon all the others, and its early removal should only be undertaken when its extraction is to confer a decided and permanent benefit.

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### Extractions under Hypnotism.

BY MILNE BRAMWELL, M.B.,

AND

W. ARTHUR TURNER, L.D.S.ENG.

BEING a firm believer in the advantages of the use of Nitrous Oxide over other methods of producing narcosis for the requirements of our speciality, I was by no means ready to believe that there existed at present any other means of inducing total insensibility to pain comparable, as regards safety and efficiency, with our justly valued anæsthetic. Within the last few days, however, I have been surprised to find that Hypnotism properly applied is of the greatest value not only in rendering a patient insensible to pain but also in preventing after-suffering. I do not here propose to enter into any lengthy detail, but merely desire to state some of the facts observed by me. I was recently invited by Doctor Bramwell, of Goole, to see some of his patients whom he was treating Hypnotically, and to test the value of Hypnotism in relieving or preventing pain during the removal of teeth.

I had a large choice of patients, and selected those which I considered would afford a severe trial of this method. One upper molar, which another dentist had on three occasions failed to remove, I extracted without difficulty and with no signs of pain from the patient. She then, without awakening, rinsed her mouth, and I extracted the fellow-tooth of the opposite side. The hypnosis was induced and removed almost instantaneously. She stated emphatically that she had no recollection of the operation being performed, that she had felt no pain, and there was no resulting tenderness of the gums.

Another case, that of a young girl suffering from valvular disease, a weak anæmic subject, whom one would expect to find "deepen" considerably under Nitrous Oxide, and remain in a state of collapse for a whole day after Ether, was quickly and quietly rendered unconscious. I then extracted two left lower molars, which were decayed down to a level with the alveolus, with pulps exposed; also two right lower molar stumps, and a lower bicuspid: all difficult teeth. There were slight muscular twitchings, such as

one often finds under an anæsthetic, but there was no complaint of pain after the operation, and the patient was quickly restored to her normal condition. I extracted in all about forty teeth; tried my best to discover defects, and questioned the patients myself, but the results were most satisfactory. Three typical cases are here appended:—

Miss A. age 15, Teeth extracted, right upper molar, left upper molar, caries; left lower molar, abscess; temporary canine, persistent.

Remarks—No conjunctival reflex, dilated pupils, no pain.

Mrs. B., age 36, Teeth extracted, upper molar right, first and second lower molars right, left lower wisdom, and right lower bicuspid—stump forceps used in each case.

Remarks—Conjunctival reflex absent, no sign of pain.

Miss C., age 24. This patient was sent to me from another room with a note from Doctor Bramwell, stating that he would not be present during the operation, and enclosing a written and signed order for her to sleep and submit herself to my control. Upon presenting this the patient at once fell asleep.

I extracted two upper bicuspid stumps quite buried by congested gums, and very tender to the touch. I then awakened the patient and found that she was quite free from pain.

This is important as showing that patients may be sent from a distance, without necessitating the personal attendance of the hypnotiser.

A great advantage of hypnosis over narcosis, is that no gag is required in the former, as the patient is entirely under the control of the operator, opening the mouth at command or altering position as suggested.

I hope to get Doctor Bramwell to give a demonstration to a meeting of the Society, when those interested will be able to judge for themselves.

*Leeds.*

W. ARTHUR TURNER.

The patients upon whom Mr. Turner operated had, for the most part, been under the hypnotic influence but a short time, while the suggestion of analgesia was made in some instances for the first time on the day of operation or the night before. The patients in these cases, as in all others, retained full freedom of will, and were able not only to refuse to be hypnotised, but also to resist suggestions made while they were under hypnosis.

*Goole.*

MILNE BRAMWELL, M.B.

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## LEGAL INTELLIGENCE.

### Value of a Dentist's Practice.

MR. JUSTICE GRANTHAM sitting on Wednesday, Feb. 5th, without a jury heard the cause of Clifford and another *v.* Brown. This was an action brought to recover £111 arrears of weekly payments agreed to be paid by the defendant to the plaintiffs in respect of the practice of a dentist at Ealing. The facts were shortly as follows. By an agreement dated June 23, 1886, between the plaintiffs and defendant, the plaintiffs agreed to take the defendant into their service for a term of one year as a general dental assistant. The plaintiffs were to pay the defendant £4 per week salary and a further £5 for every £100 received by the defendant. The salary and commission were guaranteed to be not less than £5 per week. The defendant was to pay the plaintiffs £40 per annum for the house, Lyncombe Villa, Ealing, by weekly instalments, and the defendant was to devote the whole of his time to the practice. After the defendant had had three months' trial it was agreed that the defendant should keep all the fees of the practice and should pay the plaintiffs the weekly sum of £3 for twelve years from July 3rd, 1886; then the practice, furniture, instruments and house were to become the defendant's property. It was alleged on the part of the plaintiffs that the sum of £111 was due in respect of the said weekly payments. The defendant denied liability, and further contended that it was agreed that the practice of a dentist should continue to be carried on and advertised under the name and style of Clifford Eskell, but that the plaintiffs refused to carry on the practice under that name and style, and withdrew the advertisements of the said practice, whereby the defendant became discharged from his agreement, and he counter-claimed for damages in respect of the plaintiffs' refusal to carry on practice under the said name, and the withdrawal of the advertisements. Mr. Justice Grantham gave judgment for the plaintiffs for the amount claimed with costs. Mr. G. Candy, Q.C., and Mr. Rosenthal were for the plaintiffs; Mr. Channell, Q.C., and Mr. H. Lloyd for the defendant.

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At the annual meeting of the governors of the Victoria Dental Hospital, Manchester, held at the hospital, Grosvenor Street, on Monday, February 10th, Mr. S. L. Helm presiding, £10,000 was asked for for the proposed new building, which was urgently needed.

## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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Odontological Society of Great Britain.

THE usual monthly meeting of the above Society took place at its rooms, 40, Leicester Square, on Monday, March 3rd, Mr. FELIX WEISS (President) in the chair. A large attendance of members and several visitors were present.

The CURATOR (Mr. Storer Bennett) reported the receipt of a specimen from Mr. Morton Smale. It resembled a lower wisdom tooth. It was very small, and upon extraction was found to be an odontome. He also showed the head of a mummified cat 4,000 years old, presented by Mr. Hutchinson.

Mr. W. F. HENRY suggested shell corners for restoring defective teeth. Many patients objected to contour filling in gold, and in these cases shell corners were useful. He recommended fixing them on with white cement.

The PRESIDENT remarked the shell corners were not hard to manufacture.

Mr. STOCKEN had several times taken pieces out of ordinary porcelain teeth and fitted them in place with osteo.

Mr. VAN DER PANT (Kingston) showed models illustrating a case of non-eruption in a lad aged 14. In the lower jaw the posterior bicuspid, permanent canine on the right, and the central incisors were absent; one temporary incisor was present. In the upper jaw, both permanent lateral incisors were absent, and the deciduous canine stood distally to the permanent bicuspid on the left.

Mr. CHARTERS WHITE thought the case of interest, and mentioned a similar one.

Mr. ACKERY showed models illustrating non-eruption in a family. The eldest girl had only two lower incisors; the eye teeth were regular and normal. The second member of the family had two lower incisors between the canines. The third daughter had only two laterals. The father had only three lower incisors.

Mr. BLAND SUTTON then read for himself and Mr. Charters White a communication on "Ovarian Teeth."

In shape, size and number the teeth are little influenced by the age of the patient or the size of the cyst. The teeth have been found in cysts removed from children, nor is the period of their eruption or development influenced by the age of the individual in which the cyst appears. The time at which ovarian teeth are shed is equally uncertain. Although it has been demonstrated that the hair in dermoids after a certain time falls off leaving the cyst "bald," yet no equivalent or "edentulous" condition of dermoid has as yet been encountered. The number of teeth in a cyst varies greatly; very often none are found, while not infrequently they are overlooked by the operator.

In recorded cases the number has varied between two or three and as many as four hundred. Such large numbers are rare. The teeth are usually embedded in loose bone, resembling the alveolar borders of the jaws. They often project from a flat piece of bone like the heads of nails driven into a piece of wood. The authors believe that this bone is developed subsequently to or concurrently with the development of the teeth, and they base their contention upon the fact that the teeth are often found embedded in the soft tissues of the tumour, and also because the germs are found unassociated with bone or cartilage. The fang is completed after the eruption of the crown, as obtains in the ordinary teeth. The sockets of the teeth are lined by alveolo-dental periosteum. In dermoids the teeth are collected usually into two or more groups. Ovarian teeth differ much in shape, frequently resembling supernumerary teeth, some like incisors, some like canines. The crowns are frequently bicuspidate or multicuspidate, while the fang is usually simple, although specimens containing more than one fang do occur. The crown would appear to develop at the expense of the root, teeth with small crowns possessing long roots. Geminatio sometimes occurs. Concerning the structure of the teeth little has been definitely proved. The researches of Owen, Salter and Coleman are cited. No central chamber appears to exist (Salter) in the long slender teeth; dentine fibrils appear to radiate from a central line or point. Enamel and dentine are always present, but cementum is not so constant. The enamel occurs in lumps or hummocks upon the crown, leaving deep ravines between, which often extends into the dentine. The enamel fibres appear to run in all directions without order. The dentine maintains its normal position to the enamel or pulp, but becomes irregularly arranged towards the end of the fang, and twisted "looped dentine" is occasionally met with. Large and conspicuous interglobular spaces exist between the enamel and dentine. Cementum sometimes, absent, varies greatly in amount, and may even exist simply as a thin coating over one side of a fang. The pulp is very irregular, while many bicuspidates and incisors have none, in the multicuspidates it is of fair size. In many it is converted into osteo-dentine, in others the pulp chamber contains vascular fibrous tissue, the teeth presenting an apical foramen, sometimes the pulp is full of fat globules. The pulp in some cases presents the same characters as in normal teeth, and exhibits fibrous tissue traversed by blood vessels while nerves are also present. In one case cells were seen lying near the dentine, which closely resembles odontoblasts. Recently one of the writers found nerve tissue in a dermoid and nerves in the ovarian teeth contained in a cyst removed from the other side, and these contained what appeared to be large nerve fibrils. Dermoids from other parts of the body (orbit, &c.), must contain nerves, for patients can localise pain in them. In this connection it should be remarked that

dermoids are commonly the seat of a peculiar pain. Loose rounded bodies likened by the authors to "sugar coated pills" are found in dermoids, cellular in structure, and termed "epithelial pearls," they are allied to enamel organs. An illustration of an epithelial pearl is given enveloping the head of a papilla like a normal enamel germ, and remaining connected with the free surface of the loculus whence it arose. Many of these germs lack a definite follicular wall, and this, it is supposed, accounts for the deficiency and occasional absence of cementum on the fang. No evidence of second teeth germs was detected. The epithelial pearls sometimes remain cellular, sometimes develop enamel, and in some dermoids horn or nail. These pearls have further been shown to exist along the median line of the hard and soft palates, at the confluence of the two epithelial structures. They are small in this position, and occasionally seem to act as germs of tumours—palatine adenomata. They are occasionally associated with papillæ in the mesopalatine suture, giving rise to a mesopalatine tooth. Further, it is suggested that since they are found in the neighbourhood of the gums, they may account for supernumerary teeth other than the mesopalatine variety. Some of these pearls have been described as remnants of the gubernaculum. Caries has not been detected in ovarian teeth, although small cavities are often seen sometimes communicating with the pulp chamber, but these cavities have only been seen in macerated specimens, and are due to the decaying away of the fibrous tissue which exists between the hummocks of enamel.

In an addendum by Mr. Charters White, it was pointed out that the ovarian teeth found, roughly resembled molars and bicuspid. The molars were stunted, finishing in some cases abruptly at their necks, while in others terminating in a tap root which ended abruptly. The molars have well pronounced and numerous cusps separated by deep fissures. The bicuspid often resembled ill-formed canines.

The apical foramina were in some cases quite absent while in others were widely open, even occasionally to the entire width of the neck. The enamel presented a sodden appearance and was perforated so as to resemble a worm-eaten board. The microscopic specimens were prepared by being slit open with a diamond disc on the dental engine. Examination of the sections showed that the perforations before noticed on the enamel entered and traversed it in tortuous tubes. The enamel prisms presented every degree of granularity, and were often marked by cross striæ as obtains in imperfectly developed enamel, while the prisms were twisted and twirled in every direction. The junction of dentine and enamel presented a fringed appearance from the irregular prolongations of wide and distorted tubuli at its base. In one specimen the enamel was wanting and the deficiency was made up by true bone containing lacunæ and canaliculi.

In the dentine the tubuli do not pursue the same course for long but curve off and become developed in an irregular erratic fashion. The

dentine shows a number of interglobular spaces, but smaller, and more scattered than in normal dentine; large and irregular lacunæ were also described and figured, filled frequently with sarcous tissue. Two teeth in which the pulp was present were examined in sections after hardening. The large size of the vessels in comparison with the delicate capillaries of normal pulp was conspicuous. No nerve fibres were found. The stroma was coarser and more open than usual.

The PRESIDENT having opened the discussion, Mr. ARTHUR S. UNDERWOOD spoke in eulogistic terms of the paper read, and said he considered it as a "classic" on the subject with which it dealt. In a description of a dermoid cyst, published in a Boston paper, teeth lodged in two bones were mentioned. The bones were sutured together, and resembled parietals; the teeth were called bicuspid and molars. He also pointed out the presence of two fangs in one of the specimens passed round. With regard to the so-called epithelial pearls, there had been careful work done by a French author, M. Malassez, upon these curious bodies, and his conclusions were that they sometimes developed into supernumerary teeth, sometimes into neoplasms. Commenting upon the disorder of the tissues, Mr. Underwood pointed out that this always occurs where the pulp "forgets" to do its duty, and endeavours to produce secondary dentine.

Mr. STORER BENNETT said that, according to Mr. Sutton, where the enamel was deficient on the crowns of the teeth reminding of the fissures to be seen in molars and bicuspid, and the fissures were filled with fibrous tissue, while on the authority of Mr. Charles Tomes, it was known they had Nasmyth's membrane, and it was very remarkable that cementum was either absent or very thin, and instead of cementum on the Nasmyth's membrane there should be fibrous tissue.

Mr. CUNNINGHAM asked whether any sign of caries was present in the ovarian teeth examined, as in the case at Buda Pesth to which he had referred there were appearances resembling caries, and Mr. Charters White, in replying, pointed out that there was none, but appearances like caries, but not caries, were presented by macerated specimens.

Mr. MAGGS asked for an explanation of the arrangement of cusps in the multi-cuspidate teeth.

Mr. F. J. BENNETT said, with reference to calcification in ovarian teeth, if they looked at secondary calcification, which took place in old teeth, it seemed to begin in the middle and to extend outwards. Might not these ovarian teeth, which followed so aberrant a course in many ways, also be aberrant in having calcification taking place in a way quite the reverse of it, *i.e.*, from without inwards towards the centre?

Mr. SUTTON having replied, it was announced that the next meeting would take place on April 14th, when Mr. Henry Sewill would read a paper on "Some Points in the Etiology and Pathology of Dental Caries," which would be illustrated by photo-micrographs of the tissues, exhibited on the screen by Mr. Andrew Pringle. The original slides would be shown under the microscope. Casual communications

would also be made by Mr. W. Scott Thomson on "Splicing Dental Engine Bands," and by Mr. Harry Baldwin, "On a Case of Hyperostosis of the Upper Jaw."

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### The Venetian Fete.

THE Grand Venetian Fête and Fancy Fair which had been anticipated with so much interest has proved a most successful enterprise, the net profits, including the proceeds of the silver raffle, amounting to between £25,000 and £26,000—the sum, as is already known, being destined to the establishment of permanent premises for the Dental Hospital of Ireland.

The Fête was held in the Leinster Hall, and no better or more suitable building could have been secured for a bazaar organised on so extensive a scale. So far as the object for which the undertaking was promoted is concerned, it may be mentioned that since the Dental Hospital of Ireland was opened (in temporary premises) more than ten years ago, between seventy and eighty thousand cases have been treated. But although the need for more suitable premises was deeply felt by the surgeons of the Hospital, they abstained from making a general appeal to the public until the present occasion, chiefly on account of the general depression which prevailed amongst practically all classes of society in Ireland. The sum the committee required for the establishment of the permanent hospital was £3,000, and the utmost they hoped for was £6,000. The unexpected and unlooked-for surplus, however, which has been acquired by this most successful Fête and Carnival will undoubtedly place the permanent institution on a solid foundation, and the disbursement of the funds in the hands of the directors afford incalculable benefit to the public.

The Fête commenced under most favourable auspices, numbering amongst its patrons and patronesses such names as the Lord Lieutenant and the Countess of Zetland, the Protestant and Roman Catholic Archbishops of Dublin—Lord Plunket and Dr. Walsh—the Marchioness of Londonderry, Princess Edward of Saxe Weimar, the Duchess of Abercorn, the Duchess of Leinster and the Marchioness of Dufferin and Ava, the Marchioness of Ormonde, the Countess of Aberdeen and many other ladies of title and distinction. The attendance at the inaugural ceremony was very large, amongst those invited being—Sir John and Lady Ball Greene, Sir Edward and Lady Hudson Kinahan, the Provost of Trinity College, Sir William and Lady Stokes, Lady Carew, Dr. and Mrs. Finny, Mr. and Mrs. James Robertson, Dr. and the Hon. Mrs. Smyly, Sir Patrick and Lady Maxwell, the President of the College of Physicians and Mrs. Atthill, Sir Robert and Lady Stewart, Mr. W. J. FitzPatrick, Lord and Lady Morris, Mr. and Mrs. Hogg, Dr. and Mrs. Duffy, Sir George and Lady Porter, Sir Robert and Lady Ball, &c.

The ceremony, performed by Lady Londonderry took place at one

o'clock her Ladyship, who was accompanied by the ex-vice-roy, being received at the entrance to the Hall by Dr. Stack, Mr. Pearsall, and other members of the Organising Committee, and by them conducted to the platform at the rear of which stood the stalls under the control of the Duchess of Abercorn.

Mr. G. M. P. MURRAY, F.R.C.S.I., then read to her ladyship the following address (which was beautifully illuminated by Mr. J. M. Kavanagh, A.R.H.A., and bound in Irish poplin).

To the Most Honourable the MARCHIONESS OF LONDONDERRY.

MADAM,—The Committee of the Dental Hospital of Ireland early in 1889 appealed to the public to support them in organising a large fancy fair for the purpose of raising a fund to build a Dental Hospital, specially constructed with numerous properly lighted operative rooms.

The Committee pointed out that the services of the staff were given without fee or reward, and submitted that the charitable public should supplement these services by locating the hospital in premises adapted in the best way to economise valuable time. Having with this case appealed to your ladyship for patronage, we met with a most prompt and favourable response. A year has now passed by. The cause of the Dental Hospital has been taken up by Irishmen of all creeds and parties who have recognised that this benevolent object is worthy of wide support.

This charitable cause has enlisted the sympathy of a number of prominent Irish artists who have active support on a most liberal and attractive scale. They have painted that magnificent series of Venetian views, and portraits of Venetian notables which you are about to unveil to the public gaze. Added to these the garlands and wreaths of early roses, the green and purple grapes, the twining tendrils of the vines, the Venetian masts, are calculated to lead your ladyship in fancy to the supposed scene of the fair.

Over the different stalls are to be seen the names of those who have furnished them, including representatives of high influence, in rank and commerce, in our country, who have provided their tables plentifully for those who would buy what is useful, interesting, ornamental, antique, artistic.

We feel that your early adhesion has been of much service in leading our cause thus far towards success. We are specially encouraged by your presiding to-day, and we are most deeply grateful for your noble example in taking a prominent part in this our charitable work.

Signed on behalf of the Dental Hospital Committee :—

Rev. SAMUEL HAUGHTON, M.D.  
 JAMES G. POLLOCK, J.P.  
 ROBERT H. MOORE, F.R.C.S.I.  
 DANIEL CORBETT, M.R.C.S.E.  
 ROBERT HAZELTON, F.R.C.S.I.  
 W. BOOTH PEARSALL, F.R.C.S.I.  
 R. THEODORE STACK, M.D., Hon. Sec.  
 A. W. W. BAKER, M.D.  
 DANIEL CORBETT, JUN., F.R.C.S.I.  
 G. W. YEATES, M.B.  
 G. M. P. MURRAY, F.R.C.S.I.

Lady LONDONDERRY briefly replied, expressing her gratification at seeing so energetic an effort being made in aid of the institution. Her ladyship was then conducted round the hall, and inspected the stalls with evident interest and made purchases at several of them, also donating that held by the Duchess of Abercorn with the sum of £25.

The appearance of the hall itself, decorated under the able direction of Dr. Stack and Mr. Booth Pearsall, assisted by the ladies who had been placed on the committee, was a positive picture.

Everything that taste assisted by artistic ideas and the still more important practical help from genuine artists could devise was done to make the Fête truly Venetian so far as its surroundings went. The balconies of the hall were hung with Venetian draperies in embroidered stripes of yellow, red and blue, each stripe being "vandycked" and decorated with a fringe of gold lace, beads of gold being plentifully interspersed amongst the trimming. The stalls were divided by means of partitions supported by Venetian masts, around which were entwined garlands of roses and vine leaves, whilst surmounting each mast was a portrait of some Venetian notability—doge, senator or artist. Upon each of these masts, which numbered twenty, was exhibited a picture, the series having been painted by Mr. Charles Russell, R.H.A.

The stall holders included the Duchess of Abercorn ; Lady Grace ; Lady Hudson Kinahan and Mrs. George Kinahan ; Mrs. Goulding ; Mrs. Rob. H. Moore ; Mrs. W. Booth Pearsall and Mrs. W. J. Martin ; Mrs. Theo. Stack and Mrs. Edward Birch ; Mrs. Hazleton, Mrs. Bowker, Miss A. Gill and Miss Reid ; Mrs. G. W. Yeates, Lady Rossmore, Mrs. Bennett and Mrs. Hall ; Lady Stokes, Mrs. Munroe and Mrs. Holmes ; Vicountess Germanstown, Mrs. Corbett, Mrs. Drake, Mrs. Palles, Mrs. Moore (Ashton), Mrs. Dallas Pratt and Miss Rose Browne ; Mrs. Arthur Baker, Miss Salmon and the Misses Gray ; Mrs. G. M. P. Murray and Mrs. Adam Findlater ; Mrs. J. W. Thacker, Miss Thacker and Mrs. Archibald Robinson ; and their costumes were beautiful though certainly very varied, one stall being attended by ladies who in their dress represented nursing sisters, Swiss and German peasants and ladies of the Directoire ; whilst at another was to be found a rather incongruous mixture of Puritans, gypsies and gondoliers. Roman, Sicilian and Normandy peasants were plentiful, as also were the ladies who appeared in the picturesque dresses with which Vandyke and Rembrandt loved to clothe the females of their day. Gypsies were in strong force : but the most effective costume perhaps was the Grecian—a beautiful flowing garment of white and red, with braidings of gold lace—which was worn by those ladies who assisted at the stall presided over by Lady Hudson Kinahan and Mrs. George Kinahan. It is needless to say that the



stalls were well stocked with saleable and buyable goods of every description, charming nick-nacks and articles of a saleable kind; but their chief feature was the back ground to each, this feature being beyond all doubt the most original ever introduced at a bazaar in Dublin, or, as far as record goes, anywhere else. It consisted of a picture at the rear of each stall beautifully painted in oils of some tit-bit of Venetian scenery, the stalls being so constructed that the impression left on the mind of the visitor as he passed through the hall was, that he had been looking merely through a window upon a choice scene worthy of an artist's brush.

For instance, at stall No. 10, held by Lady Percy Grace, was a picture representing "The Madonna of Chioggio," by Mr. J. M. Kavanagh, A.R.H.A. At the adjoining stall was a fine painting by the same artist, representing the Rialto and the Grand Canal of Venice, and next to that another, also by Mr. Kavanagh, giving a view of the Guidicia Canal by moonlight. Mr. Kavanagh also contributed a pretty picture entitled, "A Fisher's Shrine," to stall No. 6, another representing the Bridge of Sighs and a few others. Mr. Walter Osborne, R.H.A. contributed "A Sunny Canal," "The Anchorage and Dogana, Venice" and a "Venetian Bye-Way," with sunlight effect. Another view of "The Dogana, Venice" after Turner, and "A Venetian Moonlight" were the work of Mr. Charles Russell. Among the rest of the pictures were, "A Venetian Canal," by Mr. G. W. Yeates, "Venetian Butterflies," by Mr. W. B. Pearsall, "The Banceutor on the Festivity of Wedding the Adriatic," by Mr. H. C. Tisdall, and "The Piazzetta" and "The Ducal Palace," by Mr. Philip H. Miller. Most, if not all, of these oil paintings fetched satisfactory prices during the days that the Fair lasted.

In the annexe was carried on what was described as a Venetian market, consisting of a dairy in full work, presided over by Canon Bagot, a stall laden with country produce, such as butter and eggs, under the direction of Mr. James Robertson, and the refreshment stall—Mrs. MacIvor's department—which was largely patronised, not only light refreshments such as tea and coffee being served, but also dinners and luncheons, with an elegance and taste that did ample credit to the young ladies who adapted themselves so readily to the vocation of attending to the wants of a multitude of hungry and thirsty people. Everybody seemed pleased, and to accomplish this where eating and drinking are concerned is no light matter. The cooking arrangements are said to have given general satisfaction.

In this part of the building was a shooting gallery, and at stall No. 10, a number of handsome paintings in suitable frames were shown being mostly landscapes, which were afterwards balloted for by the ticket holders on the Art Union principle. They were presented by Miss M. K. Benson, Miss Alment, Mrs. Maurice Hime, Miss C.

Benson, Miss Culverwell, Mrs. Vesey Stoney, Miss Geraldine Lloyd, Miss Armstrong, Miss Holmes, Mrs. Dawson-Borrer, Miss Josephine Carson, Miss Edith Maguire, Messrs. W. D. Galpin, J. H. Mummary, J. Todhunter, W. B. M'Guinness, R.H.A., R. W. West, H. C. Tisdall, David Hepburn and the Rev. C. Ovenden.

One spot in the main hall had an immense attraction for gentlemen, but it was difficult for visitors on the outside fringe of the crowd to approach the central figures of the group, or to even see what they were doing. Perseverance, however, obtained after a time its reward, and when discovered, they were found to be four young and very lovely girls, in the dress of Spanish gitanas, in charge of a tiny roulette table with four corners, or colours, on which to place the stakes, and one of the most ingeniously constructed little wheels yet used in the practice of this game. The stakes ranged from threepence to sixpence, and that good business for the Dental Hospital was being done was evident from a glance at the well-filled capacious pocket of the young lady *croupier*. A mechanical canary placed in a cage on a table in the hall attracted numerous admirers by its beautiful warbling, and the sale of tickets for the drawing of this ingenious piece of workmanship proved very satisfactory.

The Venetian well, standing by the Duchess of Abercorn's stall, challenged universal admiration, its artistic merits being undeniable. It was designed by Mr. W. B. Pearsall, and painted by Mr. W. W. Small, of the Queen's Theatre. Into a bucket in the well the visitor dropped sixpence, for which, in a remarkably short time, a prize was drawn up for him. This ingenious contrivance was liberally patronised and did a good share in aiding the funds of the Carnival.

The collection of antique silver in the raffle, for which many of our readers were personally interested, was on view on the opposite side of the platform. In the evening a handsome bronze figure of Bacchus with nine electric lights, which was lent by the Central Electrical Engineering Company of Dublin, added considerably to the beauty of the scene.

The performances on the first evening consisted of a concert given by Mrs. Glynn, Miss Byrne and Messrs. A. Percy, Laneham and Egan, Mr. Frank Manley conducting. This was followed by an amusing farce entitled "A Cup of Tea," produced under the direction of Mr. W. H. Sinclair, and in which the characters were represented by Miss Helen Conway, Messrs. James Mantell, Charles Lindsay and Claude Malcomson. The farce was extremely well produced, and Miss Conway gained deserved applause for her clever acting and for her finished rendering of the song "Love was once a Little Boy." A Smoking Concert, which was well attended, subsequently took place in the *foyer*. The band of the Seaforth Highlanders occupied the gallery and played an attractive programme, winding up with the National Anthem.

On the second day, during the afternoon of which the Countess of Zetland paid a visit to the Fair (the Viceroy being unable to attend), the evening entertainments consisted of the farce "A Cup of Tea," which was repeated by special request, and a second Smoking Concert. The music during the day was supplied by the King's Royal Rifles.

On Saturday afternoon a special entertainment for children was given (arranged by Dr. Corbett) consisting of a Punch and Judy performance by Professor Como and an amusing conjuring exhibition; and later in the day General Stannus gave a number of humorous readings which were warmly appreciated by a large audience of ladies and gentlemen. The evening's proceedings commenced with a concert, conducted by Mr. Frank Manley, the farce "A Cup of Tea," was again most successfully performed, and the evening brought to a close by a smoking concert at which there was a large attendance, including many ladies who seemed rather to enjoy the fragrance of the weed which floated through the apartment, and most of whom sat out the concert to the end. Several accomplished amateur vocalists contributed items to the programme, which included banjo selections and recitations. Among the gentlemen who assisted were Messrs. Edwin Hamilton, W. P. French, C. Dunne, A. Malcomson, D. Keogh, J. Perry and J. Allen. Some of the songs were classical ballads and others were of a humorous character, the choruses of the latter being given with great spirit by the male portion of the audience. The band for the day was that of the Gloucester Regiment. On Monday, the fourth and last day, the band of the King's Rifle Regiment played a selection of operatic music in excellent style. During the day, a devoted friend of the Dental Hospital appeared on the platform in the guise of a Christy Minstrel and in company with "The unspeakable Turk" (already well-known to the visitors of the Fair) monopolised the attention of all comers with Ethiopian ballads to a banjo accompaniment whilst his friend assisted as "bones." Their appearance on the platform created a great sensation, and they retired on their laurels amid great applause. The *foyer* was well attended both afternoon and evening, enjoyment being incessant. At the concert Mrs. Glynn Miss Byrne, Mr. Lenaham, and Mr. A. Perry assisted with their customary success, and the comedietta "A Cup of Tea" again gave great satisfaction.

It had originally been intended to bring the Carnival to a close after the third day, but from the time of the opening ceremony the crush was so continuous and severe that only a very limited number among the many thousands who thronged the hall had anything like an opportunity of inspecting the beauty of the stalls and their contents, and it may fairly be added that in consequence of this state of things purchasers were not so numerous as they would otherwise have been. Complaints were general on the part of visitors that the great crowds were

a terrible block in the way of a satisfactory inspection of the numerous beautiful things exhibited, and, therefore, at very great inconvenience to the Committee, who had their hands full in preparation for the grand concert on the Tuesday, and the subscription ball on the Thursday following, they decided to continue the Fancy Fair a fourth day. Public interest in the artistic exhibition had in no way abated, and the hall was filled with visitors who evidently came to assist the Dental Hospital by purchasing at the stalls, the amount of business done in this way being extensive. Promenading was a pleasure as the numerous company could move about with freedom, and it may be said that for the first time the contents of the Fancy Fair were seen satisfactorily.

The grand concert took place on Tuesday, and was honoured by the presence of the Lord Lieutenant and the Countess of Zetland, who brought with them a large party. The names of the Directors—Sir R. P. Stewart and Dr. T. R. Joze—were sufficient to guarantee a musical treat, and the choir of over 100 voices, which had necessarily been got together at a short notice, sang admirably in several pieces; the principal items being Mendelssohn's "Hear my Prayer," the solo of which was sung by Mrs. Burrowes, and the evening hymn "O, glad-some Light," from Sir A. Sullivan's "Golden Legend;" this last chorus being especially well performed. The programme included a harp solo by Miss Josephine Sullivan, who earned a well-deserved encore; two brilliant violin solos by Herr Werner, and several recitations by Miss Emily Butler; two songs "Charity" (Pinsuti) and "Clear and Cool" (Blumenthal) sung by Mrs. Carey, and "My Queen" and "Come into the Garden, Maud," both of which were admirably rendered by Mr. William Armstrong; Chopin's "Ballade in F," played by Miss Edith Oldham, who proved herself a brilliant pianist; two songs tastefully sung by Miss Lucy Ashton Hackett, and "The Bedouin Love Song," by Mr. Charles Kelly, contributed to make the concert a very delightful one, and it was fully appreciated by the large and fashionable audience who were present.

The Fête and Carnival was finally brought to a close by a grand subscription ball given on Thursday, February 13th, in the Leinster Hall, which had been allowed to retain its carnival decorations for the occasion. The ball, which was patronised by the *élite* of Dublin society, proved a most unqualified success, and no such brilliant gathering has been seen within the walls of the Leinster Hall since the Masonic Ball two years ago. Her Serene Highness the Princess Edward of Saxe-Weimar was present, attended by Captain Darby, A.D.C., and there were upwards of 700 visitors present. All the arrangements were perfect, a detachment of the mounted Dublin Metropolitan Police being present to keep the passages clear and provide for the ingress and egress of the visitors from one room to another.

The supper room arrangements were well presided over by Mr. Mitchel of Grafton Street.

On Friday, February 14th, the drawing for the antique silver took place in the Royal College of Surgeons, Ireland, in the presence of the following members of the Committee of Superintendence of Raffleing :— Sir Percy Crace, Bart., Messrs. B. E. Whitestone, F. Perry, and G. Drury. Twenty little children of very tender years were present. These at first balloted for places and were each then labelled with a ticket indicating the prize which each one's draw would represent. The large hollow wheel of the Hibernian Academy was brought into requisition, and the following is the result of the drawing :—

	BLOCK No.	NAME AND ADDRESS OF WINNER.
1st	5251	T. F. Pigot, 41, Upper Mount street, Dublin.
2nd	8797	G. H. Broughton, West house, Compton Hill road, London.
3rd	A11612	J. H. C. Murray, Ashfield, Beau Parc, Co. Meath.
4th	979	B. F. Fleming, 3, Uxbridge terrace, Dartmouth road, Dublin.
5th	606	Mrs. M. Burke, 107, Baggot street, Dublin.
6th	11692	Mrs. Townsend, Harrow House, Ballybrack, Co. Dublin.
7th	22544	Mrs. Cherry, 36, South street, New Ross.
8th	367	W. Geale-Wybrants, Esq., 45, Raglan road, Dublin.
9th	603	Miss F. Wingfield, 2, Eaton square, Monkstown, Co. Dublin.
10th	3009	E. H. Kelly, Grosvenor Hotel, Dublin.
11th	B269	Rev. R. Atkinson.
12th	10492	Adam L. Blood, 6, Longford terrace, Monkstown, Co. Dublin.
13th	A6039	Robert Whitehead, Greenside Lodge, Woodhouse, Milthorpe, Westmoreland.
14th	8901	Mrs. J. E. Vernon, Castle park, Kingstown, Co. Dublin.
15th	30085	H. Williams, 32, Ship Quay street, Derry.
16th	30405	W. H. Woodhouse, 10, Melcomb place, Dorset square, London, N.W.
17th	15003	A. Cane, Esq., 12, St. James' terrace, Clonskeagh, Dublin.
18th	616	T. Purcell, Esq., 71, Harcourt street, Dublin.
19th	9048	Miss Hannan, 130, Lower Baggot street, Dublin.
20th	8171	H. Verner, Esq., Churchill, Moy, co. Armagh.

PERCY R. CRACE, Bart., *Chairman.*

GEO. DRURY, *Secretary.*

These winning numbers were published in the *Daily Express*, *Irish Times*, and *Freeman's Journal*, in Dublin, on Monday, 17th February, 1890.

The *London Times* stated at the last moment that it was against their rules to publish them.

PERCY R. CRACE, Bart., *Chairman*.

B. E. WHITSTONE.

F. PERRY.

GEO. DRURY.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

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### On a Subjective Sensation of the Mouth in Women.

By W. B. HADDEN, M.D.LOND., F.R.C.P.

ASSISTANT PHYSICIAN AND DEMONSTRATOR OF MORBID ANATOMY TO ST. THOMAS'S HOSPITAL; ASSISTANT PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN.

WITHIN the last twelve months four cases of this distressing and obstinate affection have come under my observation. I know of no references in medical literature to this subject, though possibly some exist. Hence I have ventured to give the cases in some detail in order to show that the main features of this affection are practically identical in each case. All the patients were women of adult or advanced life. The onset is stated to have occurred at the ages of thirty-nine, fifty-two, sixty-three, and seventy-four. In every case the sensation was described as being an intolerable burning of the tongue extending sometimes to the lips and roof of the mouth. In the two cases last recorded, the sensation was especially severe at night and, also at any time of the day when the patient lay down. One of the patients had a small epulis of the upper jaw, and another enlarged papillæ on the tongue. These local conditions in all probability had no essential share in causation, although it is possible they had some influence in intensifying, and perhaps in predisposing to, the subjective sensation. Disregarding one patient, the woman with an epulis, whom I saw only once, the other patients were nervous, excitable individuals, who flushed readily. In the case last described in this paper, the influence of shock in intensifying the local feeling is well exemplified. This affection no doubt is "functional," and forms a well-defined group in that large class of subjective sensations in women. The distress and misery which this condition entails, and the serious way in which sleep is interfered with, are well illustrated in the following cases.

The first patient who came under my notice was a lady aged seventy-four. For the opportunity of seeing her I am indebted to Dr. McFie Campbell of Liverpool. She was suffering from aortic regurgitation, with irregularity of the heart and dyspnoea. From the history it would appear that the cardiac trouble had been in existence some years. She was quite aware that she was the subject of serious heart disease, but she looked upon this as trivial compared with the misery entailed by the local condition in the mouth. For six months she had had an almost constant burning and scalding sensation about the tip of the tongue and lips, which made her life wellnigh intolerable, and which

seriously interfered with sleep. There was nothing objective in the mouth. She suffered somewhat from flatulence and constipation, but this did not appear to be related in any way to the local state. She was very nervous, easily excited and frequently flushed with little or no obvious cause. At first I was inclined to think that the sensation in the mouth might be due to some vascular change caused by the valvular incompetency; but in the light of the cases which I saw subsequently I feel considerable hesitation in invoking this explanation. The local sensation was slightly relieved by the use of cocaine tablets containing one-sixth of a grain, and later one-third. For a week I tried tincture of belladonna in doses of ten minims three times daily, though without effect. The patient died a few months after I first saw her, the local condition persisting with little change until the end.

In the early part of last year two other cases of this kind came under my observation. The first, to which I have already alluded, was that of a married woman of thirty-nine, who had a small epulis. The local feeling in the mouth was such as has been described. Unfortunately I have only a very brief note of the case, and I was unable to see her again after the first visit. The other patient was a married woman of seventy-five, whom I still see from time to time. There was no history of nervous disease or of "nervousness" in her relatives. She had always been a healthy woman, and had suffered from none of the symptoms incidental to women at the cessation of the catamenia, which occurred in her case at forty-nine. She had seen better days, and clearly felt the change for the worse in her social life. Her face reddened easily, and she was emotional and nervous. Her account was that twelve years ago she began to suffer from a burning sensation of the tongue, referred to the middle of the dorsum. Since that time the feeling has never left her even for an hour, has slowly grown worse, and has extended during the last five years to the gums and roof of the mouth. Six years ago she had excellent teeth; but when the gums began to burn, the teeth became blackened and decayed. About this time she was seen at St. Thomas's Hospital by my colleague Mr. Pitts, who tells me that he cauterised some enlarged papillæ on the dorsum of the tongue near the tip. I examined the mouth, and found the tongue was moist, clean, somewhat fissured, and with prominent papillæ. When touched with the finger she said that the sensation was "like burning." There were some minute papilla-like outgrowths on the gums, and the same sensation of burning was felt when the gums were touched. I took the temperature of the mouth on several occasions, but it was always normal. There were many old fangs, and the few teeth that were left were carious at the roots. She could detect sugar and salt, but mutton, beef, and other kinds of meat tasted bitter. A few days previously to her visit she had some cod, but could not tell what it was. She said it tasted like boiled bread. She complained also of a constant bitter taste in the mouth. The quantity of saliva was thought to have increased of late. The sensation of heat in the mouth was always worse at night, and so severe was it that the patient declared that she never slept. About this she was very emphatic, and when pressed hard would only admit that she occasionally "fell into a stupor." Constantly during the night she had to sip milk-and-water to relieve the discomfort. Sometimes she tried to sleep in the afternoon, but without success; the burning became intolerable as soon as she lay down. It

was very clear from her statements that the local condition had made her life a burden, and had interfered to a serious extent with sleep. For the preceding six or eight months she had been unable to take solids, because of the burning pain which was excited. Accordingly during this time she had been obliged to live upon fluids. For many years she had suffered from nettlerash, with great itching, chiefly occurring at night. For six months I tried many remedies, likely and unlikely. Among the drugs employed were jaborandi, bromide and iodide of potassium, belladonna, chlorate of potash, antipyrin, and the local application of glycerine of borax and boro-glyceride. No benefit was derived from any form of treatment.

The last patient was a florid, excitable, married woman of fifty-three. There was no history of neurosis in the family. The catamenia ceased at the age of forty-five, and shortly afterwards she began to suffer from flushing of the face, which still persists. About a year ago the tip of the tongue began to tingle. About a couple of months later she received a shock from seeing a brother, just come from abroad, who was suffering from a cancerous affection of the face. The slight tingling of which she had previously complained was at once replaced by a burning sensation of the tongue, which soon extended to the entire mouth. At first the burning was almost confined to night, and was especially noticed when the patient retired to bed. Now the feeling of heat is constant, but becomes worse at times. The sensation is somewhat relieved by eating food and by sipping water and cooling drinks. She complained that she slept badly, and, like the patient last described, she said that her sleep was more like falling into a stupor. She could detect sugar and salt, but meat tasted very insipid. There had been no noticeable alteration in the quantity of saliva. The mouth presented a normal appearance, and sensation was natural. The feeling of heat was not induced by touching any part of the fauces or tongue. All the teeth had been removed with the view of alleviating the local distress. The patient was only under my treatment for two or three weeks, and several remedies which I tried failed to give relief. I expect to see the lady again when she comes to London, and then I propose to try the effect of a mild continuous current. Dr. Poole Berry of Grantham, under whose care the patient now is, kindly took the temperature of the mouth and axilla night and morning for a week. No rise of temperature was noted.—*The Lancet*.

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### The Hyderabad Chloroform Commission.

TO THE EDITORS OF THE LANCET.

SIRS,—Although wishing that space would permit me to express my keen appreciation of the work done by the Commission, I feel that, as there is so much to be said on this important subject, I must at once proceed to the consideration of the questions at issue.

In the first place I would ask what is the true value of the physiological fact that, when chloroform is administered in toxic doses to the lower animals, respiration ceases before cardiac action? Have we any clinical evidence to prove that, *under similar circumstances*, this sequence of events is not met with in human beings? In most, if not in all, of the rapidly fatal cases which have occurred under chloroform,



it has, for obvious reasons, been a matter of extreme difficulty to say at what particular moment the heart ceased to beat. Failure of the pulse has often been taken to mean stoppage of the heart, but without sufficient grounds. If it were possible to make a series of observations upon human beings with that accuracy which is attainable when conducting experiments upon lower animals, I should not be surprised to learn that, when chloroform causes death solely by reason of its toxic properties, the same sequence of events as that observed by the Hyderabad Commission invariably occurs. But our knowledge concerning the action of the heart under anæsthetics is almost entirely dependent upon observations on the pulse; and it would seem that confusion has frequently arisen in consequence of failure of the pulse having been taken to mean that the heart has "suddenly ceased." I am here only referring to those cases in which chloroform itself would seem to have been the cause of death; and in such cases, which are usually rapid in their course, I do not think the clinical evidence we possess is sufficient to disprove the contentions of the Commission. But this, I submit, is the least important part of the subject. Even though we admit the fact that, when chloroform itself is the direct cause of death, respiration ceases before the action of the heart, we are confronted by a question which seems to me far more important than that upon which the Commission has laid so much stress. When fatalities occur during the administration of chloroform, are those fatalities invariably caused by the direct toxic effects of the drug? In other words, have we not conclusive evidence to show that, in man, deaths under chloroform sometimes arise by reflex cardiac failure which is only indirectly due to the anæsthetic? I cannot regard the experiments of the Commission in this direction as rendering such a position untenable; for cases have come under my own observation in which symptoms of cardiac depression obviously of reflex origin have arisen. Whether it be the low vascular tension of chloroform narcosis or other conditions I know not; but I feel sure that there is something that renders the human heart under chloroform susceptible to impulses which are utterly inoperative under ether. I am inclined to the belief that the performance of many operations under chloroform is attended by considerable risk from this quarter; and I am by no means satisfied that cardiac inhibition is less likely to be produced during profound than during imperfect anæsthesia under chloroform. Not long ago I administered chloroform, by means of Junker's apparatus, to a patient of about thirty-five years of age, whose general health was good. Anæsthesia was produced in from eight to ten minutes, and was characterised by muscular flaccidity, abolition of lid reflex, and slight stertor. There were two stages in the operation about to be performed, the first of which consisted in placing a temporary ligature round the carotid artery in the neck. Whilst the artery was being exposed for this purpose the pulse became extremely feeble, the face pale, and respiration shallow, and the operator had some difficulty in recognising the carotid artery by reason of its extraordinary diminution in size. The head was lowered. After three or four compressions of the chest the pulse improved, and, as rigidity and lid-reflex soon reappeared, I was obliged to continue the administration, having recourse to ether for the remainder of the operation, which was successfully performed. The day after the operation, whilst the wound over the carotid was being examined, the patient's

face suddenly became pale, the artery contracted as on the previous occasion, the eyes were observed to turn upwards and the muscles of the jaw to twitch, and for a few seconds unconsciousness was present. Now, in this case, when the first attack of syncope occurred the patient was thoroughly anæsthetised by chloroform; whilst the quick return of muscular rigidity and of lid-reflex proves that the anæsthetic was in no way to blame as a *direct* cause of the symptoms. Cases of this kind are, I believe, by no means uncommon, and they would seem to point to the conclusion that reflex syncope may undoubtedly arise under chloroform even when the anæsthesia is profound. Apart from anæsthetics, some persons are, as is well known, more prone to syncope than others, and this would seem to be so with regard to patients under chloroform. How can we compare the patient above referred to to the pariah dog? Would the latter be likely to be attacked with syncope by manipulating its carotid? I gather from the report of the Commission that syncope, should it arise, is a safeguard against chloroform poisoning rather than a condition involving much danger to life; but we cannot look upon it in this light when we meet with it upon the operating table.

In conclusion, I would say a few words concerning the indications afforded by the pulse during chloroform administration. There is much evidence to show that, in whatever way death occurs during chloroform narcosis, the pulse, if carefully watched, usually gives warning of the approach of danger before respiration has become seriously affected. In those cases in which cardiac depression is only indirectly due to the chloroform—such, for example, as the case I have related—the initial symptoms are obviously cardiac in origin, and are hence to be detected by alteration in the force and frequency of the pulse. In those cases, too, in which the symptoms are indisputably due to an overdose of chloroform—such, for example, as the cases reported by the Commission—the pulse will, in obedience to the fall of vascular tension (which, as the Commission admits, precedes stoppage of respiration), give indications of the most important character. If the Commission could prove that when chloroform is administered in toxic doses respiration invariably ceases *whilst* the radial pulse is practically unaltered in quality, we should begin to look upon chloroform as a respiratory poison only; but these are not the facts, so far as I understand. I cannot avoid the conviction that the Hyderabad Commission have incurred a grave responsibility in eulogising chloroform as an anæsthetic for general purposes, and in recommending administrators to disregard the indications afforded by the pulse. As I have before ventured to point out in these columns, we should consider the inexperienced rather than the experienced, in recommending an anæsthetic. I have lately read the records of every fatal case reported by *The Lancet* and *British Medical Journal* as having occurred under anæsthetics in the British Isles from 1880 to 1889 inclusive, and I find that out of a total of 130 chloroform deaths no less than fifty-four took place in connexion with minor surgical operations, most of which were doubtless conducted with somewhat less caution than would have been employed in more critical cases. Are we to advise the use of chloroform (which Dr. Lauder Brunton admits to be a most powerful drug) to recently qualified men, who have perhaps never employed it before? I confess I cannot regard it as advisable to permit those with but little

experience to administer chloroform to patients coming into the surgeries of hospitals with a dislocated shoulder or a lacerated finger, yet this course is one which the Commission appear to countenance. Even though we accept the facts so ably put before us by the Hyderabad Commission, we are, I would submit, in no way justified in agreeing with the practical conclusions at which the Commission have arrived.

I am, Sirs, yours obediently,

FREDERIC HEWITT,

*Instructor in and Lecturer on Anæsthetics at the  
London Hospital, &c.*

*George Street, Hanover Square, W.*

*Feb. 24th, 1890.*

— *The Lancet.*

### The Need of Publication of Chloroform Fatalities.

M. MARCEL BAUDOUIN, writing in *Le Progrès Médical* (Feb. 22nd), reproaches his countrymen for not recording the cases of fatal administration of chloroform which came under their cognisance. He says that it is most pressing that we should get out of the "clinical chaos" in which we are at present respecting anæsthetics, and the only way to effect this is to record all the misadventures. The example of the American and English faculties in this matter is, he says, worthy of being followed. "In fact, the English are much more courageous on this point than we are"—a statement which he supports by referring to a table of deaths from chloroform published by Duret in 1880, which included statistics for fifteen years, all of them (135 cases) being gathered from English or American sources, with the exception of twelve from the practice of French surgeons, and five of these hitherto unpublished. Duret said that from 1847 to 1880 there had been only 241 deaths from chloroform in the whole world; but it can hardly be doubted, says M. Baudouin, that during this period there must have been more than 1000. He urges, therefore, that the publication of these fatalities should be made in the medical journals (and there is room enough, he adds, in the enormous number of columns supplied weekly by the French medical press), a course recommended by Duret ten years ago, but which seems to have fallen upon deaf ears. It would seem (says M. Baudouin) that in France such "indiscretions" are not permitted; but then "we are more advanced nowadays." Should this step be taken, it will be necessary to record every fact bearing on the case and its issue, and especially as to the minutest detail of the mode of administration of the anæsthetic. M. Dastre, whose work on Anæsthetics has given rise to this appeal, complains, and with justice, of the meagreness with which these fatalities are often reported.—*The Lancet.*

### How to Run a University.—The Sale of American Diplomas.

A MOST astounding account of the systematic way in which the business of selling the degree of M.D. has been conducted in some parts of America was recently published by the *Boston Sunday*

*Herald.* According to the report before us, there are five of these "bogus diploma mills" in the United States (one each in New Jersey, New York, Ohio, Vermont, and New Hampshire), and one in Canada, at Montreal. The investigations of our contemporary were specially directed to the proceedings of an institution calling itself by a high-sounding title—"Universitas Trinitatis, Collegium Medicinæ et Chirurgiæ, Reipublicæ Vermontis." Its Dean lately forwarded to Mr. A. H. G. Hardwicke, described as a well-known hardware dealer of Buffalo, a beautiful Latin diploma which declared that the faculty admitted him to the rank of doctor of medicine, with "all rights, freedoms and honours belonging to that station." Now, it does not appear that Mr. Alan H. G. Hardwicke had proved anything of the kind, nor that the "examining instructors" had had, or indeed seriously sought, any opportunity of ascertaining that he was "well grounded in medicine and surgery." In fact Mr. Hardwicke knew nothing of medicine or surgery, being, as has been already said, a successful and respected dealer in hardware. For the purpose of investigating and, if possible, exposing the whole system, he applied to the person calling himself Dr. H. F. Bradbury, Dean of the Trinity University.

At first some small pretence was made of requiring some sort of examination. This is what "the Dean" says in his first letter:—"We can get you a much better article than the Bellevue. We can get you an article from a college in Ohio for 150 dols., dated 1880, or one from a university in one of the New England States for 60 dols. This latter will be dated the coming May. Your brother has ordered one of the latter. I enclose circular. All business must be done with me, not sent to the university. I should like very much to see you. Wish you could come this way, and when here get your article. You should send thesis, and also pass some kind of examination, so you can swear in court of law it was granted after due examination. Send money by express." This was on the 13th of April, 1889. By the 22nd of April the Dean will be more easily satisfied as to his correspondent being able to show that he is well grounded in medicine and surgery. "If you write a good thesis," he tells him, "we will pass you on the examination." The *Herald* having made inquiries on the spot, it was finally determined that Mr. Hardwicke should attempt to obtain one of the diplomas. No great difficulty was encountered, and, after a little fencing, the Dean consented, on the 18th of August, "To send the goods c. o. d. This," he adds, "is something I never did, and it is not customary in this business. However, if you give me your word as a gentleman that you will take the article from the expressman just as soon as it gets to Buffalo, without any delay or exposure, I will send it." Accordingly, the following letter was, on the 27th of August, 1889, addressed to "Dear Mr. Hardwicke," whom the writer, so far as appears, had never seen:—"We have shipped to you this a. m. goods, c. o. d. 60 dollars, per agreement. We sent by the name of E. L. Needham, as we did not wish to put our name on the express. Please take it as soon as arrived.—Yours faithfully, DR. BRADBURY." In it the recipient—"a well-known dealer in hardware," be it remembered—found his learning set forth in most official Latin: "Quoniam inter omnia Academica Corpora, secundum leges instituta [sic] mos antiquus et honestus factus est, magno honore donare, eos qui studium fideliter dederint Literis et Scientiæ et Artibus Utilibus, atque se inter-

dum integriter portaverint, Igitur quum Alan H. G. Hardwicke" [hardware merchant, to wit !] "nobis se Arti Medicinæ per tempus usitatum et secundum leges operam dedisse demonstrat" [*sic*], and so on.

*Secundum leges*, there is the rub (says the *British Medical Journal*, from which we take these extracts). The articles of incorporation had been duly "recorded March 25th, A.D. 1889, at 8 o'clock a.m. by E. A. Booth, town clerk." So that it would seem that this university, founded, according to the modest claims of its parents, "for the purpose of education and charitable purposes," but confining its operations mainly, if report be true, to selling diplomas *doctoris medicinæ* to hardware dealers and others, is not an illegal body; neither is it, if the report in the *Herald* states the case correctly, the only institution of the kind in Vermont.—*St. James's Gazette*.

### The New Zealand Dental Association.

THE New Zealand Dental Association was formed at a conference of delegates held in Wellington last July, and its first annual meeting has just terminated in this city. The sittings were held at the Criterion and occupied two days, Thursday and Friday last. The following gentlemen were present:—Messrs. Boot and Hunter, Throp, J. P. Armstrong, F. Armstrong, Robinson, and Hewitt, of Dunedin; Messrs. Thomas and Merewether, Christchurch; E. Cox, Auckland; J. Goodwin Cox, Timaru; and Thompson, Invercargill. Apologies were read from Messrs. Rawson, Hoby, and others unable to attend.

Mr. Boot (president of the association) occupied the chair, and welcomed the members to Dunedin.

The objects of the Association, it may be said, are similar to those of the parent association in Great Britain—viz., to promote periodical meetings of its members, to maintain and carry out the spirit and provisions of the Dentists Act, or any amendments thereof, and to watch over and further the general interests of the profession.

At the sittings of Thursday, after receiving reports from branch representatives, the bye-laws of the Association were reconsidered and confirmed, the first only of these evoking prolonged discussion—the question whether membership should be thrown open to any and all registered dentists, without any condition as to the mode of conducting practice; or whether, as with the British Dental Association, it should be opened to any registered dentist, provided he be of good character, and that he does not conduct his practice by means of the exhibition of dental specimens, by public show cases, by unprofessional modes of advertising, by the unlawful assumption of professional titles, or by titles which have no legal recognition or value and are merely pretentious and misleading. To discourage and put down empiricism, it was insisted, was a public duty, and with this view no person should hold the legal right or be allowed to practise whose name does not appear on the New Zealand or Imperial register, or was placed there illegally. This led to the consideration of the New Zealand Dentists Act, and whether and how far—for the promotion of the above objects—it required amendment, and to the resolution to obtain legal opinion upon this and kindred questions. Later on Sir Robert Stout was introduced to the meeting, and a series of questions submitted for his

opinion, including the registration of the Association and the *modus operandi* in case of prosecution under the New Zealand Dentists Act.

The subject of dental education was then discussed and the recommendations of the Wellington Conference confirmed, but it was deemed advisable to lay these at once before the University Senate and petition for immediate educational action.

The sitting of Friday morning was devoted to the consideration of the "Code of dental ethics." In compliance with the request of the Wellington Conference, Mr. E. Cox submitted to the meeting a paper upon this subject, dealing with the obligations of the dental practitioner in relation to his profession, to his patients, his *confrères*, to the medical profession, and to the general public. With the vote of thanks, Mr. Cox was desired to revise his paper for publication with the report of the proceedings of the meeting. The afternoon sittings considered the legal opinions received from Sir Robert Stout, and the cases of alleged violation of the provisions of the Dentists' Act already open to litigation.

A vote of thanks to the president and secretary, and the decision to hold the next annual meeting at Christchurch, closed a very cordial and successful conference.--*Otago Daily Times*, Jan. 15, 1890.

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### London Fog: its Cause, Effects, and Treatment.

EVERY dweller within or near the metropolitan area must sympathise with Dr. Alfred Carpenter in his laudable endeavour to explain the causes and consequences of London fog, and to suggest an effectual remedy. After due inquiry, founded on careful physical and chemical observations, he concludes that the essential character of this inconvenient phenomenon has nothing so do with river vapour but is almost wholly due to chimney smoke. The very colour of the familiar shroud, its opacity, density, and diurnal prevalence, its incidence in the absence of a low barometric register, and its fickle conformity to every change of wind, all point, he tells us, to but one conclusion. His observations, moreover, are supported by microscopic evidence. Particles of unconsumed carbon and globules of oily hydrocarbon are easily detected on slides exposed for a time to the murky atmosphere. Chemistry contributes its quota of evidence by revealing not only a marked deficiency of oxygen, but an excess of carbonic and of sulphurous acids. It seems, therefore, pretty clear that the true nature of the city spectre has not, in this case, been mistaken. As regards consequences to health, Dr. Carpenter ascribes to the properties above mentioned a somewhat prominent share in the production of chest disorders and a resulting increase in mortality statistics. By way of compensation, however, though not in excuse of the evil, we are reminded that another source of mischief—namely, sewer air—is in great measure shorn of its hurtful influence by meeting in fog-air with a fairly potent purifier. Two blacks, however, do not make a white, and the disinfection of drain impurities, attainable, as it is, by other methods, will hardly justify our neglect to abolish if possible the lung-irritating action of air overcharged with carbon. This brings us to the question of a remedy. In dealing with this matter, Dr. Carpenter's fertility of resource is not

wanting. He proposes the imposition of a heavy tax on all fire-places which do not consume their own smoke; the compulsory employment where coal continues to be burnt of a comparatively smokeless fuel, which, moreover, is to be subject to a special duty; and finally, the use of gas of low illuminating power, and at the cost of 2s. to 2s. 3d. per 1000 feet for cooking and heating purposes. There is no doubt that these proposals, if carried out, would go far towards removing from us the worst elements of the too familiar fog. It is, however, extremely improbable that the public mind, if consulted, would agree to any such sweeping enactments as those suggested. As matters now stand, the use of gas-stoves, admirably designed alike as to cleanliness, freedom from odour, and heating power, is daily increasing. The taxation of household grates and of coal, as advised, we fear, would still be premature. There is better hope of success from the introduction of its remedial counterpart—a system of improved smoke-consuming fireplaces—though we can see no reason why steps should not be taken to enforce the very reasonable provisions of the Smoke Abatement Act in the case of manufactories.—*The Lancet*.

### The Influenza.

THE spread and decline of the epidemic, which is fast disappearing from this country, was well illustrated in the figures adduced in *The Times* of the 5th inst., by Mr. Horace Hart, Chancellor of the University Press, Oxford. He gave a table of the number of persons employed there who were absent from sickness each day during the four weeks ending Feb. 1st. Out of a total number of *employés* amounting to 562, the usual daily absentees from this cause numbered four, but from Jan. 6th onwards the numbers rose from 29 on that day to 70 on the 18th, after which the number steadily decreased till, on Feb. 1st, there were only 17 absent. We may hope that the returns received by the Local Government Board from all parts of the country will in like manner illustrate on a large scale the decline of the epidemic. There is very little to report on the further course of the pandemic, which has now spread practically over the whole of the northern hemisphere. If any conclusions can be drawn from general statements, it would be that in Great Britain the affection has been less virulent than in some of the continental cities. Opinions vary much as to the contagiousness of influenza. Dr. Baumler of Freiburg, writing in the *Munchener Med. Wochenschrift*, would consider it to be rather of the contagio-miasmatic type than the purely contagious. As regards the alleged discovery of an influenza microbe, it may be remarked that the published statement of Dr. M. Jolles of Vienna does not convey the impression that the organism he met with in the sputa of a patient suffering from pneumonia after influenza, and in the urine of other cases, was materially different from the pneumonococcus of Friedländer, the main point of distinction resting upon its behaviour in gelatine cultures; and his detection of it in the main source of water-supply to Vienna does not *per se* indicate that the organism is really the influenza microbe. In a review on this subject (*La Province Médicale*, Feb. 1st), Dr. G. Roux calls to mind that in 1884 Otto Seifert described a streptococcus in the nasal secretions of influenza, and later

was associated with Fr. Muller in confirming this discovery. Dr. Ribbert declares that he has found a streptococcus in eight cases of influenza, six being cases of pneumonia, identical with the streptococcus pyogenes ; and his observations are in part confirmed by those of M. Vallard of Val-de-Grace. It would seem, however, that none of these researches and others in the like direction have been able to satisfactorily account for the cause of influenza, but that the presence of such microbes may be favoured by antecedent conditions induced by the general "influence," and that here may be found the key to the varying degrees of intensity of the disease, the variety of its manifestations, and its complications. We understand that in the Metropolitan Police the number of officers on the sick-list has diminished from 1860 to 851, and that there has been only one death, which resulted from bronchopneumonia.—*The Lancet*.

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### Immediate Torsion of Teeth.

THERE have been but few cases published of so-called immediate or forcible torsion of teeth to correct malposition. In the current number of the *Dental Record* Mr. Scott Thomson relates one which was successful in a girl fifteen years of age. The teeth of the upper jaw were regular, with the exception of the lateral incisors, which were twisted through the segment of a circle, the lingual surfaces looking towards the central incisors, as is usual in these cases ; the teeth were small, and the necks of nearly cylindrical form. As there was not sufficient time during which the patient could be under observation to treat the case by mechanical means, immediate torsion was decided upon. Previously to the operation an impression was taken, and the right lateral sawn off the plaster model and replaced in the desired position in the arch, and a vulcanite frame with a gold cap to fit over this tooth was constructed. Gas being administered, the right lateral was grasped with forceps and rotated, but considerable force had to be used, the tooth becoming elongated and loose. The plate was at once adjusted. Not thinking it advisable to operate on the other side until he saw the result of this, and yet not wishing to lose time, Mr. Scott Thomson commenced to treat the other mechanically. Without going into details, it is sufficient to say that in three weeks the left lateral was only a quarter of a circle out of position, the tooth operated on being firmer, and neither painful nor tender. A second operation easily brought the left lateral into good position, and a retaining plate with caps for both teeth was at once applied. The patient was seen two months later, when the right lateral was still a little long, but firmer, its colour being as good as its neighbours, and it was translucent by electric transillumination, showing that the pulp was living ; the left was almost normal in every way. The points which seemed to the writer noteworthy in this case were : first, the age at which the operation was undertaken, it being laid down as a rule that it should only be performed between the ages of eight and ten—that is, before the roots and sockets are fully developed, although in this respect it is not a unique case ; and secondly, the difficulty of the first as contrasted with the second torsion, the ease of the latter being doubtless due to the three weeks' mechanical treatment having enlarged the socket. The dangers necessarily in-



curred in this operation of fracturing the tooth with the forceps, or of rupturing or strangulating the vessels entering the pulp, make it one, Mr. Scott Thomson thinks, not lightly to be entered upon—in fact only to be performed as a *dernier ressort*.—*The Lancet*.

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### The Electric Light at the British Museum.

AT the invitation of the trustees of the British Museum a large and distinguished company assembled on Tuesday evening at a private view of the galleries, now for the first time lighted by electricity. Some 3000 invitations were issued, and the galleries were thronged with visitors anxious to witness the result of the new experiment. It may unhesitatingly be affirmed that the installation is a success. The lighting is in every respect adequate, the details have been well thought out, and the effect, taken as a whole, is eminently satisfactory. Both arc and glow lamps have been employed, the former in the spacious galleries on the ground floor, containing Greek and Roman sculpture, the Elgin marbles, and Assyrian and other antiquities, as well as in some of the galleries on the upper floor. The glow lamps have been utilised in the long suite of bronze and vase rooms on the west, and in the ethnographical gallery on the east of the upper floor, where it was deemed that the exhibits would be seen to better advantage by this kind of light. In the galleries on the ground floor there are sixty-nine arc lamps of various powers, while on the upper floor there are fifty-seven arc and 627 glow lamps. In addition to these, there are five large arc lamps in the reading-room, six in the courtyard and upwards of 200 glow lamps in the offices and passages. The engines have been supplied and erected by Messrs. Marshall, Sons and Co. (Limited), of Gainsborough; and the electrical work has been executed by Messrs. Siemens Brothers and Co. (Limited). Among those who were present were Lord and Lady Coleridge, Lord Edmond Fitzmaurice, Mr. E. Maunde Thompson (principal librarian), Dr. Richard Garnett, Professor Sidney Colvin (keeper of prints and drawings), Professor Murray (keeper of Greek and Roman antiquities), and Mr. A. W. Franks, F.R.S. (keeper of British and mediæval antiquities). Medicine and science were well represented, amongst those present being Sir James Paget, Sir Joseph Lister, Sir Alfred Garrod, Sir E. H. Sieveking, Sir Oscar Clayton, Dr. Hickman, Dr. Tirard, Professor Adams, Professor Flower, Professor Ray Lankester, Professor Jeffrey Bell, Professor Crookes, and Mr. W. H. Preece, under whose supervision the installation has been carried out.—*The Lancet*.

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THE following item is of very general interest, and opens the way to some instructive speculations for our chemical friends:

### The Solubility of Glass Bottles.

Dr. Thresch said at the British Pharmaceutical Conference, some years ago, he was investigating the action of rain in certain districts on vegetation. It was supposed that some lime-kilns, which had been recently erected, materially affected vegetation, and he had

collected the rainfall at many different points. When he collected the rain on litmus and other papers, he almost invariably found that it had an acid reaction ; but, strange to say, when collected in bottles, it was either neutral or distinctly alkaline. On investigating the cause of this, he discovered that in all the bottles he employed—he tried all kinds and found the results the same—some decomposition took place in a very short time, and the free acid disappeared. His impression was that it was a decomposition of silicate of soda or of lime, in which the acid combined with the base, and the silica was thrown down. That this was the case was the more probable, because in evaporating samples of rain water, he found that when collected in platinum dishes, the solid residue per gallon was 1 to 4 grains less than when collected in glass, and this residue was chiefly silica. He also noticed, in making further experiments, that in titrating an acid solution, if the acid were run in until a faint tint was produced with litmus, and then the liquid were boiled for a few minutes in a glass vessel, the colour would disappear. Upon adding acid, the colour would again be obtained, which would again disappear on boiling, and so on ; and he had seen students in the examination room go on repeating that process for an hour, thinking they were increasing the accuracy of the result, evidently not having observed that this naturally occurred when these solutions were boiled in glass flasks. Another thing still more interesting was this— if in one of these bottles—and they varied considerably, though they were all acted upon—a mixture practically neutral and containing tincture of cardamoms, were placed and kept in it for some time, it would vary considerably in colour in the course of, say, a month, and it was quite possible that the complaints sometimes made as to the colour of such a mixture were due to this cause. — *Photographic News*.

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### Town Life and Disease.

THE fact that the prevailing epidemic of influenza prevails in towns serves to remind us of the insanitary influences of town life. There are sanitary influences as well ; there is shelter from cold winds and tempests often disastrous to the ill-nourished in the country, and food is nearer at hand to the multitude. The prevalence of germs, bad odours, and other self-evident sources of grave disease in cities is well known. It is rather the less constantly recognised unhealthy habits of townsfolk that are mostly at fault when the fairly-fed and well-to-do are smitten with colds and with influenza. Diet is abundant, but taken irregularly. The townsman, as a rule, is not a good breakfast eater, and he dines too late and too heavily. He is much addicted to taking alcohol, tea, or coffee between meals. He is a late riser and goes to bed late, so that a large fraction of his "day" is spent at night in artificial light. He seldom takes enough exercise, for the "constitutional" is intolerable to men of a certain temperament, and others have no time for that form of physical exertion. A hurried race to catch a train or omnibus is not hygienic. He is gregarious, and his natural flocking instinct makes him over-look, both in his pleasures as well as his duties, the fact that he works or plays with his fellow man in ill-ventilated or over-

crowded-rooms. Above all, he is out of training, as he finds out during the first days of a holiday. Many explorers and fighting men have noted that they catch cold readily in towns after bearing cold and damp with impunity in the country. The cockney tourist, on the other hand, is often astonished to discover how he can bear a wetting or a draught at the seaside or in the fields. All the surroundings of the townsman predispose him to attacks of disease like the present epidemic. He can at least rise early and take exercise, and will soon find that such habits will be to his advantage. — *British Medical Journal*.

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DR. OCANA, who treated the little King of Spain during his recent illness, has been raised to the rank of a Grandee of Spain.—*The Lancet*.

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### Dental Surgery "to the Fore."

A PARAGRAPH in a local paper informs its readers that at the annual meeting of the — Hospital a special vote of thanks was enthusiastically accorded to its dental surgeon for the "marvellous skill displayed in his treatment of a case of fracture of both jaws" and the board congratulated themselves that "dental surgery was to the fore at —." It was stated that heretofore the sole treatment in such cases was a simple four-tailed bandage, but their dental surgeon had taken casts of the mouth and constructed splints to fit the teeth. It seems astounding that acquaintance with this method, described as it is in all the principal text-books on surgery and dental surgery, which every general student at a London hospital has had opportunities of seeing, and which we may safely say has formed part of the special education of the dentist since the foundation of the Dental Hospital in 1848, should have only now penetrated to a town not 100 miles away.—*The Lancet*.

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### MICROSCOPICAL AND LABORATORY GOSSIP.

IN reply to Mr. Caush's queries of last month Mr. G. G. Campion writes us of them:—

The sections of carious dentine which I sent to Brighton were cut with a microtome (Cathcart's) after being softened in dilute hydrochloric acid—a few drops to each ounce of water. They must be very thin. The staining was done by Gram's method as follows:—Half fill a Wolrab tube with distilled water, add six or eight drops of aniline oil, place the thumb on the mouth of the tube, shake, and filter the emulsion twice. To the clear filtrate add drop by drop a concentrated solution of aniline-methyl-violet in absolute alcohol till precipitation commences. If the

aniline water be placed in a tube the methyl-violet solution may with a little care be so added that the upper three-fourths of the water becomes coloured with the aniline, while the lower fourth remains clear. Add the methyl-violet solution till the aniline begins to drop in tiny crystals through the clear layer of fluid at the bottom of the tube ; then shake or stir the whole, and it is ready for use. It should be prepared fresh each time it is wanted. The sections should be left in it about half-an-hour and then transferred for a few minutes to iodine-potassic-iodide solution,\* after which they must be placed in absolute alcohol for decolourisation ; the time required for this will vary from, perhaps, one to six hours, according to the amount of alcohol they are placed in and the number of times it is changed. A section should be looked at occasionally to insure that the process is not carried too far, as it is not difficult to take the stain out of the micro-organisms, as well as the dentine, and so obtain a specimen which shews nothing. When sufficiently decolourised they should be cleared in clove oil and mounted in bensole balsam. There is one practical difficulty occasioned by the dark colour of the stain and potassic-iodide solution, which makes it difficult to see the sections when wanting to transfer them from one liquid to the other. To avoid this I make a small sieve of platinum gauze somewhat in the shape of a bucket and with a bucket handle. When the sections are cut and washed the water containing them is poured through the sieve, which catches them, and they can then be transferred in it from one liquid to another without any difficulty or loss, and if desired, literally in hundreds at a time.

I will send a note about the sections showing interglobular spaces next month.

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THE Royal Microscopical Society has, like the Quekett Microscopical Club, migrated to 20, Hanover Square, and the R.M.S. will in future hold its meetings on the third instead of the second Wednesday in the month.

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DR. M. ANDRESEN, of Berlin, has taken out a patent in this country for developing photographic prints on coatings of chloride,

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\* Iodine 2 decigrammes (gr. iii.) Potassium iodide 4 decigrammes (gr. vi.), water 60 cc. (℥ii, ℥i.)

bromide, or iodide of silver by treating them in a developing bath containing diamido-naphthaline, amido-naphthol, or dioxynaphthaline, or their sulpho-acids. He says that these substances are **exceptionally suitable** for developing photographic pictures.

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**ABOUT five years** ago a gentleman after receiving a kick from a horse **suffered** from extensive necrosis of the lower maxilla. Only **four of the natural** teeth were left, and the alveolus and lower part of the jaw lost to an enormous extent. He was supplied with a celluloid case to replace the deficiencies of teeth and tissue, the lightness of the material offering many advantages. When seen recently he was still wearing the case. But to illustrate the weakness of this case for artificial teeth: It was stained to a deep mottled purple hue, and only two of the artificial teeth remained *in situ*, one of which could be moved and replaced by the finger. The remainder had disappeared, according to the patient's account, "silently and mysteriously."

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WE have received the following queries from a correspondent :—

Will some of our readers kindly give a method of preparing slides of human teeth to show Naysmith's membrane, stating class of teeth to be used, method of preparing same and media for mounting?

Where is it possible to obtain teeth of various animals, reptiles, &c., for mounting?

What is the simplest method of injecting any young animal, such as a kitten?

Mr. Chas. Tomes speaks of teeth being boiled in wax. Is it the section or tooth that is boiled? How is it done? Is it to show the interglobular spaces better?

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## ANNOTATIONS.

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WE are requested to state that several copies of Mr. Poland's "opinion" concerning irregular and illegal practice have not found their way back to the Hon. Sec. of the Association. The copies have been lent at various times to persons interested in the matter, and upon each is written in red ink "To be returned to the Hon.

Sec., Leicester Square." The Hon. Sec. will feel greatly obliged if anyone possessing such copies will return them at their earliest convenience.

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THE Association is to hold its next annual gathering at Exeter, and the buildings of the new Exeter Albert Memorial Museum will be placed at its disposal for the business part of the meeting. Now this museum, which is a great centre of intellectual life for the whole neighbourhood, although it has been started by a handsome bequest of £6,000, in addition to a valuable collection of art treasures from the late Mr. Kent Kingdom, still stands greatly in need of funds, and to meet this requirement a fancy fair is being organised, which is to commence on Monday, 30th of June, 1890. As we are to enjoy the advantages of the building for our annual meeting, rent free, it is hoped that those of our *confreres* who have the gift of producing *objets d'art* will not be backward in sending offerings to assist the bazaar. One good turn deserves another, and anything of an artistic kind—painting, turning, modelling, photography, needlework, &c., &c.—will be gladly accepted. The institution comprises a Museum of Natural History and Antiquities, a Free Library containing about 16,000 volumes, a Free Reading Room supplied with newspapers and periodicals, a School of Art, in which throughout the year from two hundred to three hundred students are instructed (in the case of artisans at merely nominal fees), and the Science School and Chemical Laboratory, with an annual roll of students to the number of two hundred and forty, most of whom are instructed on easy terms. In addition to regular courses of lectures on various subjects, the University Extension Lecture Scheme was originated in this institution, and here still finds a home. Various examinations in intellectual work are held in the building (free of cost), including those of the City and Guilds of London Technical Institute, and the Royal College of Music, of which H.R.H. the Prince of Wales is President. We hope that members will not be backward in assisting this good work; if they are we are much mistaken in our estimate of the love of a good cause, which we have every reason for supposing to actuate our Society.

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AN American contemporary, *The International Dental Journal*, contains an article from the pen of Dr. Bonwill, of Philadelphia, who recently appeared amongst us as a guest at our annual meeting at Brighton. Naturally enough a great space in the paper is occupied with the author's experiences in England, and much of what he has written is well worthy of careful perusal, and contains just and valuable generalisations upon international dental ethics. At the outset it would be as well to dissipate some misconceptions under which Dr. Bonwill is labouring. First of all, if we are not mistaken, the paper was written while a certain sense of unfair usage was rankling in the mind of the author. He received everywhere, as he freely acknowledges, personally a cordial reception, but as an "accredited minister" he seems to have felt the cold shoulder. If this was so a ready explanation may be found. To carry Dr. on Bonwill's own metaphor, if he were a "minister" he brought no "papers." He did not even acquaint the official secretary of his intention to be present or to demonstrate until the fact leaked out at some casual meeting, when every possible facility was afforded to Dr. Bonwill to join in our work. The omission of his name from the draft programme was due to the simple fact that he had omitted to advise the secretary of his intentions. Dr. Bonwill made in the course of his article some remarks very much to the point, touching the feeling entertained by the average respectable English practitioner towards the illiterate and illiberal quacks who dub themselves "American dentists." We confess to having an "animus," and a very strong one, against the tricks of quackery and imposture that seek refuge under this designation, and, moreover, Dr. Bonwill sympathises with and emphasises our "animus," and declares that dentistry should be cosmopolitan and owns no nationality, at the same time we disclaim emphatically any absurd prejudices against American dentists of the true and proper type. We wish we had space to quote freely from the paper before us, but in default of this we can only refer our readers to the original article in the *International Dental Journal* for February, 1890, and assure Dr. Bonwill that while we feel as strongly as he about the miserable quacks who disgrace his country's name, we are always glad to welcome the *bona-fide* practitioner from any other country, whether coming as an "accredited minister" or simply as an honoured guest.

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A REMARKABLE CASE OF ATAVISM IN "MOTORS."—We were recently accorded the privilege of interviewing a "new patent motor," described as "absolutely costless in working" and in every way much to be desired. The assurance that it "dispenses with manual labour" was nothing to us, and the intimation that "to charge it with power is quick, easy and clean" appeared vague and disquieting, but the frank and modest statement that "it made no pretence to supplant steam power" disarmed us, and sternly repressing memories of Keeley and other modern Cagliostroes, we set out on the quest. In close confinement and much cramped in a lofty room we discovered what loomed portentously like a full size pile-driver, a complicated windlass and a merry windmill. It was indeed a lusty specimen of a family we had long mourned as extinct—a member of which we cherished some twenty years ago, with its huge weight hanging out of our window with a nice little drop of thirty feet, until the boy who wound—we beg pardon, charged—it, said he would rather work the engine or lathe itself. The modern representative consists of a weight—something under half a ton—hung on a strong chain, falling at full speed about ten feet in as many minutes, checked by a strap and drum brake and controlled by a centrifugally adjusted fan, and, like a Waterbury watch, taking nearly as long to wind up as to run down. The simplest calculation of the rate of work, or foot-pounds per minute, demanded of a practical motor, will demonstrate—what has been abundantly proved by many attempts to run light machinery and punkahs in India by the "grandfather's clock method"—that the masses, strains and friction involved leave a small margin of "efficiency" in any convenient accumulation of human physical energy by such crude mechanical means.

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VALUABLE information, from which many useful statistics may be drawn, will, we may reasonably believe, be the result of the inspection of the teeth of children, now about to be undertaken by the Association. The Representative Board at its recent meeting accepted unanimously the report of the special committee, previously appointed to consider the best means of utilizing the books prepared by Mr. Fisher; and a new committee was elected to take in hand and work out the scheme accepted by the Board. We understand that this committee expect in a few days to be in a position to forward information on the subject to the



Branch Secretaries, and others who may be able to render help in the investigation. It is to be hoped that there may be forthcoming, to undertake the individual inspection of schools, members who, by their position and education, will worthily represent the Association.

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THE following extract from the *Farmer* ought to raise a discussion among our scientific readers :—

THE DENTITION TEST OF AGE.—Great excitement and indignation were caused at the Smithfield Show last week by the enforcement of the Club's new dentition test of the animal's age. Large numbers of cattle and a good few sheep and pigs were disqualified because the state of the teeth would indicate that they were actually older than the ages under which they were entered. The plain truth of the matter is (says the *Farming World*) that in most cases at any rate it is the dentition of the animals that is at fault, and because veterinary science and practice have not kept pace with the early maturing of stock, a whole army of influential and respectable breeders are branded with the stigma of having made false entries with their animals. The following are given as suggestions for future guidance :—(1) That the dentition examination be continued ; (2) that the exhibitor of an animal whose dentition does not correspond with its stated age shall be called upon to substantiate, by sufficient evidence, the correctness of his statement as to the age of his animal ; and (3) that in the event of a failure to produce this evidence—but only in that event—the animal shall be disqualified.

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It is not always pleasant to see ourselves as others see us, but the following extract from an address read by L. D. Sheppard, A.M., D.D.S., D.M.D., before the First District Dental Society of New York, is not altogether unsatisfactory reading :—“Has the infirmary answered its purpose when it has been successfully run as the Cheap John shop? It is not germane to this paper, but is it true that the English have a better system than ours? In all their larger towns they have dental hospitals, supported by subscription, which are hospitals in deed as well as in name, while we have not one. These hospitals when connected with dental schools are as useful as our infirmaries for instruction and are true charities for the poor, while no one can claim that our college in-

firmarys truly deserve the designation of charities. Whatever we may think or say of our English brother, to him belongs the credit of adorning the dental profession with that grace which has been declared the greatest of the three, charity.

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ON Monday, February the 24th, an excellent entertainment was given by the Musical Society of the Dental Hospital of London at the Royal Victoria Hall and Coffee Tavern, Waterloo Bridge Road. The audience was not as numerous as might have been wished ; but was distinctly of that class for which such entertainments are intended. The next concert of the Society will take place at the Cancer Hospital, Brompton, on Thursday, the 27th inst. ; and arrangements are being made for one to be given at Earlswood Asylum, where a very successful entertainment was given last year.

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THE DENTAL HOSPITAL OF LONDON. — The 32nd Annual Meeting of this Institution was held at the Hospital, Leicester Square, on March 13th, under the presidency of T. Underwood, Esq., one of the Vice-presidents. In the report, which was unanimously adopted, the Managing Committee congratulated the governors on the continued success and prosperity of the institution ; also on the great benefits which the Hospital continues to afford to the suffering poor, 54,630 cases having been treated during the year 1889, a large number of them painlessly (under anæsthetics), being 3,224 in excess of those of the previous year, and 32,636 in excess of the number treated in 1874, when the Hospital was removed to its present site. That the Committee had been unable to pay off any part of the mortgage debt during the year, and that, unfortunately, there was £2,500 remaining of this debt, and they urgently appealed for funds to enable them to rid themselves of this incumbrance, incurred for the extension of the hospital, rendered indispensably necessary to meet the growing wants of the charity. Help, by an increase in annual subscriptions, is also earnestly solicited. The charity is unendowed, and additional funds would enable it to greatly extend its usefulness.

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GUY'S HOSPITAL DENTAL SCHOOL.—A lectureship on operative dental surgery has been founded, and Mr. Harold Murray has

been appointed to the chair. The lectures will be delivered yearly during the summer session. The course will include the methods of examining the mouth for dental lesions, the exclusion of saliva during operations, the preparation of typical cavities for the reception of gold and other fillings. The lectures will deal with the scientific principles involved in the various methods of inserting the fillings now in use, individually or in combination with one another. Special attention will be directed to the treatment of pulpless teeth and exposed pulps. The operative treatment of "Rigg's Disease," the preparation of roots for pivots, the inlaying of teeth with porcelain, and the application of splints to fractured jaws, will be fully discussed.

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WE copy the following as likely to interest any of our readers who contemplate practising in la belle France :—

**FOREIGN DOCTORS AND DENTISTS IN FRANCE.**—The views of M. Fallieres, the French Minister of Public Instruction, as to the practice of medicine and dentistry in France on the part of aliens, have just been sufficiently clearly expressed by him. M. Fallieres holds that the present system cannot be maintained ; and his suggestions are to the effect that foreign doctors before obtaining permission to practise should submit their diplomas to the secretary of the French Faculties, and should also undergo the final examinations compulsory in respect to French medical men. As the latter ordeal would plainly confer a French degree of the highest class on successful candidates, it is difficult to understand why M. Fallieres should insist on the scrutiny of former diplomas. Since, however, the Minister of Public Instruction admits that exceptions might be made in regard to summer and winter resorts, the hardship would in this case not be so great. As for the dentists, their qualification should depend—according to M. Fallieres—upon a residence of three years at the house of a duly qualified French practitioner, followed by registration at a school of medicine.

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THE Anniversary Dinner of the Licentiates in Dental Surgery and members of the Odonto-Chirurgical Society, will this year take place on Friday, March 21st, in the Balmoral Hotel, Princes Street, Edinburgh. It is permissible for each member to bring a guest with him, if he will kindly notify his intention to the Secretary before-hand. Tickets, 10s. 6d., exclusive of wine. The

chair will be occupied by Walter Campbell, L.D.S., and A. Alex. de Lessert, L.D.S., will officiate as croupier.

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AMONG our minor notices our readers will find a short article from the *Photographic News* entitled "The Solubility of Glass Bottles," which is well worthy of a careful perusal. The author found that rain collected on litmus paper was always acid, but if collected in bottles always alkaine; further investigation seemed to point to the conclusion that a decomposition of silicate of soda or lime took place, in which the acid combined with the base and silica was thrown down. The question is of first-rate importance to all who keep drugs in glass bottles.

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At a recent meeting of the Hackney Board of Guardians, the Master of the Workhouse asked for instructions as to supplying artificial teeth for a female pauper inmate. The medical officer recommended the assistance as essential to the health of the individual, and it was decided to enquire into the question of cost. It would be interesting to know approximately the amount of misery and disease that is at present uncheckable owing to the absence of any such scheme as that foreshadowed in our leader of this month.

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MUMMIFIED cats being now comparatively common, it would seem a good opportunity, as suggested by Mr. Bland Sutton at the recent meeting of the Odontological Society, to examine some specimens and record the variations, if any, that have occurred in the domestic cat during the last four thousand years.

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CHLOROFORM VERSUS ETHER.—Dr. Roger Williams has made a careful examination of the hospital books, from which it appears that in ten years chloroform was administered at St. Bartholomew's 12,368 times, with fatal results in ten cases, being about one in 1,236. The most important result of Dr. Williams's investigations, however, is the discovery that when ether instead of chloroform has been used during the same period, there were only three deaths out of 12,581 instances.

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THE NATIONAL DENTAL HOSPITAL.—The next Smoking Concert will take place on Thursday, March 27th, at the Portman Rooms (small suite), Baker Street, W., at 8 o'clock, Mr. Henri Weiss in the chair.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

### The Dental Curriculum.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—We must all admire the energy displayed by Mr. Pedley in calling attention to the many advantages to be found at the dental department of Guy's Hospital, but I think that it would be conducive to a better understanding on any question regarding the present or future dental curriculum, or the method of carrying it out, if the special arrangements of any two schools were not compared in a manner obviously disadvantageous to one of the two. In connection with the arrangement of lectures, it should be noted that the College requires two courses of twelve lectures each in Dental Anatomy, Dental Surgery and Dental Mechanics, but it does not say they are to be taken in separate years, and, to my mind, the Guy's system of giving twenty-four lectures each year appears to have few advantages. It is quite possible for the one course of twenty-four to be divided and called two, and thus fulfil the requirements of the examining bodies who demand from the students attendance at twenty-four lectures on these subjects. As far as the School at Leicester Square is concerned, it is considered to be more convenient that the twenty-four lectures should be given during two years, and at such times as not to interfere with the Hospital practice. I do not think the College of Surgeons would reduce the number of lectures even were the teachers to ask for only one course; it is therefore a little inopportune to move for another change so soon after the recent alterations have been made.

The two other improvements mentioned in Mr. Pedley's letter are, I venture to think, not needed. Dental microscopy should be taught in the physiological laboratory, where all the appliances are at hand, and its teaching provided for under practical physiology.

The course on Operative Dental Surgery appears to me unnecessary also, because the dental students' course is throughout practical. Each day he is being taught the very minutiae of operative dental surgery, and that in the best way, for he receives not the instruction from one man only, but from many, by which means he is taught the various methods that can be adopted, while a course from one man is

apt to develop into a one-sided method according to the idiosyncrasy of the teacher. The arrangement of each surgeon in turn giving a demonstration once a week appears to me preferable.

Your obedient servant,

MORTON SMALE,  
Dean, Dental Hospital of London,  
Leicester Square.

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TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR MR. EDITOR,—Has the Council of the Southern Counties Branch gone to sleep, or has the epidemic produced this inactivity. We were promised informal meetings for the discussion of papers hurried over at the annual meeting, but they have not been held. Can you tell us why? Surely it cannot be that the members do not take sufficient interest in dental matters to attend such meetings if called; but may it not be, dear sir, that we have grown too large, as, it seems to me impossible for any secretary (however active he may be) to have control over such a large area.

If then the Council *are* awake, may I suggest the following method of keeping the members awake also: That in all towns where there are six or more members of the branch, one of them be requested to act as a sub-secretary to that town or district, so that the members may be brought together to discuss dental matters, it should also be the duty of this sub-secretary to report to the secretary of the branch from time to time, so that members having papers or items of interest could easily be put in communication with the secretary of the branch, thus lessening the duties of the secretary, yet at the same time he would be well posted in all branch matters, while the sub-secretaries could convene meetings during the winter months that the members may have an opportunity of meeting together in an informal manner. In Bolton there is a dental society for such a purpose, and very enjoyable meetings are held during the winter months. Is it not the work of our branches to carry out this method of organisation rather than leave the doors open for individual towns to do it, and if thus left, will, I am afraid, weaken the hands of our branches.

Faithfully yours,

A BRIGHTON MEMBER OF THE ASSOCIATION.

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NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions to the British Dental Association became due on January 1st and are requested to forward the same to F. CANTON, Hon. Treasurer, 40, Leicester Square, London, W.C.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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The Dental Register for 1890.

THE annual appearance of the Register is always an event of interest to those who have at heart the objects for which the British Dental Association was formed. The statistical facts that may be drawn from a consideration of its contents are a valuable lesson to us in many ways. In these figures may be found the verification or the falsification of the hopes of those who brought into existence the Act of 1878, and guided the infant footsteps of the Association. It contains *evidence*, and evidence is always worth more to practical minds than hypothesis; facts are always better food than guesses.

The first fact of importance that strikes us is that the number of the names of practitioners who have been registered as "in practice before June, 1878," are decreasing rapidly and consistently. The present Register shows 1,100 less of such records than appeared in the Register of 1879,

and this decrease has been steady and unremitting as may be seen from the following figures:—the number in 1879 was 4,806, 1881—4,698, 1882—4,643, 1883—4,493, 1884—4,490, 1885—4,418, 1886—4,329, 1887—4,268, 1888—3,914, 1889—3,858, 1890—3,725. (It will be observed that there is no quotation for 1880; this was owing to the fact that the Register for 1879 was published late in that year, and was made to do duty for 1880, it not being thought worth while to publish a fresh Register so soon.) The last year shows a decrease of 133, which has only twice been exceeded, namely, in the first year of the existence of the Register, which was, as we have above explained, really more than twelve months, and in the year 1888, which showed the substantial decrease of 354.

The total number of names enrolled has decreased from 5,291 in 1879 to 4,818 in 1890—the highest numbers being 5,345 in 1882 and 5,296 in 1884, since which date the decrease has been constant. At the same time the number of Licentiates in Dentistry of the various licensing bodies has been steadily increasing, so that against 483 in the first issue of the Register we now find no less than 1,079. The increase of the percentage of these Licentiates to the whole number of the registered practitioners is thus shown to be constant. In the first Register of 1879 it was 9'13, in 1884, 15'12, in 1887, 17'89, in 1888, 19'94, in 1889, 20'83, and in 1890, 22'41.

Here then is indisputable evidence that the Register is being steadily purified by the lapse of time, and we may reasonably expect this change to proceed in an increased ratio from purely natural causes, so that the period is not far distant when the names of qualified men will form a majority of the total, and we may look forward at no very distant date to a Register upon which the names of unqualified men will be the rare exception to the rule, and



then it may be that the advertisers whose names appear on the Register will have diminished to the number of those few on whom the advantages of a professional education have been wasted.

While these tables are before us, we cannot refrain from asking the profession, who ten years ago trusted certain leaders to work out their destiny, whether the forecast that those leaders then gave them of the probable course of events is being fulfilled or no.

It is impossible to display in leading articles or in speeches the real work that avails in the solution of professional problems; it is easy to find fault, but the answer is often difficult, sometimes impossible, to give; those to whose lot it falls to be responsible must be content to wait for the vindication of their acts, until the slow but certain arbitrator, Time, shall adjust the merits of the question. A good thing is worth waiting for; and we think the profession need feel no discouragement at the progress the Dental Register is making towards its own purification, and that the pioneers of dental reform may reflect with satisfaction upon the fact that their promises are being substantially fulfilled.

The cost of the Register is 3s. 6d., and it is most desirable that members should make a rule of possessing a copy of each issue; copies of past years may be had for 1s. each. With each copy is bound up a copy of the Dentists Act—a fact which is obviously overlooked by many of our members, if we may judge by the questions regarding the provisions of the Act which are being constantly asked of us and of the Hon. Secretary of the Association. Amongst the publications of the Medical Council are “The Memorials and Papers relating to Dental Education,” which we may recommend as of especial interest to the members of our profession.

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## ASSOCIATION INTELLIGENCE.

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Central Counties Branch.

A GENERAL meeting of this Branch was held at the Dental Hospital, Newhall Street, Birmingham, on Thursday, March 20, at 6 p.m. There was a large attendance of gentlemen present, their names being—Messrs. R. F. H. King (Newark) ; Roff King (Shrewsbury) ; C. Batten, (Kidderminster) ; H. N. Grove (Walsall) ; F. J. Thorman and G. Birt (Leamington) ; R. Owen and W. G. Owen (Wolverhampton) ; C. Sims, F. E. Huxley, F. W. Richards, A. E. Donogan, J. Humphreys, W. Maden, F. H. Goffe, C. B. Cave, J. E. Parrott, E. Sims, G. F. C. Matthews, A. Jenkins and C. Hodson (Birmingham).

The President, Mr. R. F. H. King, after tea took the chair, and after the minutes of the last meeting had been read, confirmed and signed, called upon the Secretary for letters of apology. Three letters, one from Mr. W. E. Harding, of Shrewsbury ; Mr. Hinds, of Coventry, and Mr. F. R. Howard, of Birmingham, were read, containing expressions of regret at their inability to be present.

Mr. R. F. H. KING then read a most valuable paper on Anglo-American quackery—"Has the Dental Act of 1878 in any way diminished the Nuisance ? Is advertising less Prevalent now than it was Previously ?"

The President at the close of his paper received much applause, and congratulations on the skill and great amount of research exhibited therein.

A discussion ensued, in which Messrs. J. Humphreys, C. Sims, F. J. Thorman and F. W. Richards took part.

Mr. H. N. GROVE, of Walsall, gave his notes (see Original Communications) explaining his method of manipulation, and exhibited a patient with an excellent artificial nose. Members were very pleased with the case, on account of the great skill shown in so shaping and shading the nose that a pleasant harmony of features resulted. They were unanimously of opinion that it was one of the best cases they had ever seen.

Mr. H. N. GROVE and Mr. R. OWEN also exhibited models of regulation cases of very considerable interest.

The meeting closed with a very hearty vote of thanks to the President, who, by his kindly offices in the chair and excellent paper contributed so largely to the success of the evening.

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Southern Counties Branch.

A MEETING of the above branch was held at the Town Hall, Brighton, on March 29th, at four o'clock. Present :—W. B. Bacon, Esq., President, in the chair, and Messrs. F. J. Van der Pant, Morgan

Hughes, J. E. Welch, D. W. Amoores, George Henry, Walter Harrison, J. Dennant, H. Beadnell-Gill, James Rymer, J. W. Stoner, E. L. Norris, D. Caush, F. Bell, J. J. Bailey, T. H. Elliott, S. L. Rymer, W. T. Trollope, F. W. Ellwood, Alverstone Gabell, F. H. M. Van der Pant and others.

In accordance with the notice issued to members, the proceedings commenced with the Special General Meeting called to discuss the alterations in Bye-laws 5 and 8, recommended by the Council.

The SECRETARY moved the adoption of the recommendations of the Council.

Mr. JAMES RYMER having seconded, the motion was carried unanimously. The ordinary meeting was then proceeded with.

The SECRETARY gave an explanation of the reasons why the usual autumnal meeting of the branch had not been held.

Mr. F. J. VAN DER PANT was then called upon to read his paper on Gold Crowns. A good discussion ensued, in which the following gentlemen took part:—Mr. Dennant, Mr. Caush, Mr. D. W. Amoores, who personally testified to the success of a gold crown from a patient's point of view, Mr. Trollope, Mr. James Rymer, who objected to the practice of cutting down teeth with living pulps as usually extremely painful to the patient, and would prefer in most cases to put in gold stoppings, and Mr. Gabell, who strongly objected to gold crowns from an æsthetic point of view.

Mr. BEADNELL-GILL said he had found crowns extremely useful in cases of extensive abrasion where it was necessary to raise the bite. In these cases gold crowns on the molars answered better than contouring with many gold stoppings. He himself preferred to use pure gold of No. 4½ gauge thickness for the collar, and No. 8 gauge for the masticating surface.

Mr. FRANK BELL, Mr. NORRIS and the PRESIDENT also took part in the discussion, and Mr. VAN DER PANT in reply to questions stated that he used 22-carat gold, about 6½ gauge thickness for the collar and 7½ to crown. He considered crowns were preferable to gold stoppings in living teeth where the decay was extensive on the masticating surface, as less fatiguing and when properly done less painful to the patient. A model might be taken to fit the collar to, if desired, but by filing the cervical edge of the collar to a thin edge, it could be burnished in the mouth to a very close adaptation.

Mr. J. J. BAILEY then read his paper, "A Plea for Clinics," which met with the general approval of members, and started a most interesting discussion. No formal resolutions were moved, but it was understood that the Council would consider the subject with a view to formulating a workable plan for carrying out the idea.

The SECRETARY read a letter from Mr. G. O. Richards, who expressed his regret at being unable to be present to bring forward his "Casual Communication."

The SECRETARY read a description of two interesting models forwarded by Mr. T. A. Tait. One was a model shewing a conical supernumerary tooth, placed between and posterior to the central incisors. The other was a case of epulis caused presumably by the irritation of a badly fitting denture over diseased roots.

Mr. HUGHES also shewed a model of a supernumerary tooth placed exactly in the same situation as Mr. Tait's, but resembling a bicuspid in the shape of crown, with a well-developed root similar in shape to that of a central incisor.

Mr. G. HENRY then read a communication which appears among the Cases in Practice in the present issue.

Mr. MORGAN HUGHES, after a somewhat hasty examination of the specimen, while deferring to the more matured opinion of Mr. Henry, was somewhat doubtful in his own mind if a true cemental union existed in the specimen before them, and suggested that a *transverse* section of the two teeth, and a microscopical examination of the specimen would be more conclusive than the method of demonstration now adopted. Mr. Caush having kindly offered to make a microscopical examination, Mr. Henry consented to allow the section to be cut.

The PRESIDENT having tendered the heartiest thanks of the meeting to the members who had brought forward topics for discussion, the meeting terminated.

Over twenty members subsequently dined together at Booth's Restaurant, and the usual ceremony of handing round the Benevolent Fund Collecting Box resulted in the useful donation of £1 2s. to its funds.

MORGAN HUGHES,  
*Hon. Sec., S. C. B.*

[We hope to publish the papers by Messrs. Van der Pant and Bailey in our next issue.—ED.]

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### Western Counties Branch.

THE usual meeting of the Council will be held at the Royal Hotel, College Green, Bristol, on Saturday, April 19th, at 2.30 p.m., and will be followed at 4 p.m. by a special meeting of Members "to consider the arrangements made for the reception of the Association in Exeter next August, and for general business."

At the conclusion of the business, an informal meeting will be held, at which Members are invited to bring forward subjects or cases of interest for discussion.

HENRY B. MASON, *Hon. Sec.*

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### Midland Counties Branch.

THE Tenth Annual Meeting will be held at Derby on Friday, May 9th, 1890. His Worship the Mayor has kindly granted the use of the Guildhall, in the Market Place, for the meetings and demonstrations.

On Thursday evening, May 8th, at 8 o'clock, Geo. Brunton, Esq. (Leeds), President-Elect, and Mrs. Brunton will hold a reception for Members and their wives at the Art Gallery and Museum, the Wardwick, kindly lent for the occasion by the Committee. Mornin 8 or evening dress. Trams pass the door.

*Friday morning, May 9th.*—The Guildhall, Market Place.

9 a.m.—Council Meeting.

10.15 a.m.—Demonstrations.

12.30 p.m.—Adjournment.

1.30 p.m.—Business Meeting (Members only). Election of Officers, and other business.

2.45 p.m.—President's Address. Open to Ladies and Visitors.

3.45 p.m.—Casual Communications.

4.45 p.m.—Paper on "Physician and Dentist," by Professor E. H. Jacob, M.D., of the Yorkshire College, Leeds. Notes on "Crown Work," by Leonard Matheson, L.D.S.Eng., London.

7 p.m.—Dinner. Tickets 7s. 6d. each, to be obtained at the Midland Hotel.

### DEMONSTRATIONS.

Some Improvements in Continuous Gum-work, with Fletcher's New Furnace, by E. W. Houghton, L.D.S.I., Manchester. The Application of Rubber Dam and Gold Filling, by J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S.Eng., Demonstrator to the Dental Hospital, London. The immediate treatment of Septic Roots, by W. E. Harding, L.D.S.Eng., Shrewsbury. The treatment of Alveolar Abscess, by G. Brunton, Leeds. If suitable patients can be obtained, Crown and Bridge Work, by Dr. L. J. Mitchell, Junr., London. Electric Motors, Accumulators, Lamps, &c., &c., by Messrs. J. C. Birch, Leeds, and W. Broughton, Manchester.

Ladies will be conducted over the "Crown Derby China Works" during the time the demonstrations are taking place—a visit to which will be time well spent. They are requested to meet at the Midland Hotel at 10 a.m. During the afternoon the Art Gallery and Museum and the Arboretum may be visited. The drawing room at the Midland Hotel may be used by them.

*Saturday, May 10th.*—Arrangements have been made for the Members and their friends to visit Chatsworth (the seat of the Duke of Devonshire) and Haddon Hall (the seat of the Duke of Rutland).

The party will leave Derby (Midland Railway) in special saloon

carriages attached to the 9.28 a.m. train for Rowsley. Return fare 2s. 3d. each.

E. M. Wrench, Esq., surgeon to the Duke of Devonshire, has kindly consented to conduct the party over Chatsworth, when the fountains will be played and other special privileges granted.

Excursion tickets 7s. 6d. each, which will include conveyance from Rowsley and back, hot luncheon at Baslow, tea at Haddon Hall, and all gratuities.

It is necessary that early application for tickets be made to the Honorary Secretary, so that adequate provision may be made for conveyances and luncheon, &c.

The return train will leave Rowsley at 5.22 p.m., due at Derby 6.27 p.m.

A train leaves Rowsley for Manchester, Liverpool and surrounding districts at 5.3 p.m. and 7.27 p.m.

Programmes will be issued in due course, and Members are particularly desired to reply at once to the invitation cards, so that proper arrangements may be made.

Hotels: Midland, near the station; Royal, Victoria Street; St. James's, Corn Market.

I. RENSHAW, *Hon. Sec., pro. tem.*

Drake Street, Rochdale.

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## ORIGINAL COMMUNICATIONS.

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### Anglo American Quackery.\*

BY R. F. H. KING, L.D.S.ENG.,

PRESIDENT OF CENTRAL COUNTIES BRANCH.

GENTLEMEN,—The question I am anxious to discuss with you this evening is doubtless a burning one, and it matters not whether we live in town or country, or what class of practice we conduct, we are all more or less affected by it. The evil is so widespread, and so much on the increase, none of us can afford to shelve the question longer, or to hold it in contempt, without entering our protest against it.

I would first premise that perhaps there is no class of professional men more free from the prejudices and jealousy peculiar to all professions than (thanks to the B. D. A.) the members of the Dental profession, or who so cordially extend the right hand of fellowship to the genuine and *bonâ fide* American dentist, but it is well understood on both sides of the water that before reciprocation of thought and feeling be exchanged both hands must be clean, and that we have as much objection to their quacks as they have to ours.

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\* Read before the Central Counties Branch, March 20, 1890.

These are not the men your true American gentlemen are proud of but in the meantime our quacks take up the cry, and both trade on the reputation of all that is desirable on both sides of the water. Hence we have American institutes and the Anglo-American institutes also—you pay your money and take your choice—for ladies of limited and unlimited means. Of course we may take a lofty view, and try to persuade ourselves our position is so secure that no quackery will affect us. But directly or indirectly it does affect us, and as time goes on it will do so more; it is illegal, degrading to our profession, and an injustice to the youths we are educating.

It was thought the Dental Act, 1878, would in some measure tend to diminish the nuisance, instead of which it has had a contrary effect and given the charlatan a definite position, a position he could not lay claim to before, and the recent trials and convictions have taught them how to evade the law with impunity and safety, and it involves the question as to profession *v.* trade, or professional services rendered *v.* goods sold and delivered. Different classes of people hold different views with regard to advertising, but by far the largest class are merchants, traders, and business men generally, and it is to these most of us look for support; let us consider their view; they say *advertise—advertise*, or be content to take a back place in the rear of your more enterprising brethren, and pick up the crumbs they miss, and they point to Holloway's Pills, Huntley and Palmer's Biscuits, Rickett's Blue, Pears' Soap, &c., &c., *ad infinitum*; you will find yourself left behind in the race, or behind the times if you do not advertise. "Nothing succeeds like success," without reference to the moral. Oh, you are a professional man are you? let it be so, then, and if you prefer to eat the humble pittance of respectability, act in a professional manner. Hide your light under a bushel; live on respectability—pay your way on professional respectability—and go to your grave mourned by a very limited, but respectable circle, and the only legacy you can leave to your family will be one upon which there will be no legacy duty to pay *viz.*, your respectability.

You say the leading men in London, both in the Medical and Dental profession do not advertise—well, we cannot all be leading men—and I should doubt if it could be said that the leading men in town do not advertise, either in the Medical or Dental profession; true, they do not daub it on with a pound paint brush, a camel's hair brush, with neutral tints would be perhaps more in their line, touched so delicately as scarcely to be noticed though felt, and so long as it does not offend the laws of good taste, and does not overstep any professional etiquette, and speaks the truth, we take no exception to it, but if it lies, and holds out promises to the ignorant and impecunious, which they well know can never be realised, for the sake of robbing them of the little money they have, we have reason to protest, and we have a right to teach the public how to defend themselves.

The Dental Act was framed with this view and to protect the public from imposture, to secure to them properly qualified and educated men, and the qualification was intended and is a guarantee from the Government that a man holding one is not an impostor, but what he represents himself to be, viz., one skilled in dentistry. I would ask how has the Act affected this? is advertising less prevalent now than it was before the Act came into operation, has it given any protection to the public or to the profession? Are not our daily and weekly papers and periodicals inundated with the most fulsome lies it is possible to concoct or the human brain to conceive? It has been well said, that if such men would display half the ability in acquiring professional skill they do in concocting lying advertisements, it would be better for them, and those they practice on. But that is not their forte; work to them is drudgery, they hope to find a royal road to success by means of lying advertisements, and the public are, of course, willing and eager to believe any nonsense that promises a royal road to cheap, easy, and painless dentistry, and to believe those who do not advertise, are old-fashioned and behind the times, nor can they understand that he who does not advertise is in a better position to give them value for their money than he who spends hundreds per annum in advertisements; these unscrupulous men take advantage of the susceptibility of the public in their partiality for advertising generally, no matter how fulsome; they look upon it as a venial sin, savouring of chivalry—business shrewdness, and a clever fellow he who can lie the hardest in regard to his own ability and his own wonderful attributes. "Nothing succeeds like success," let the moral go to the winds, the almighty dollar is their deity, they cannot pay their way on squeamish nice distinctions about morality. They say if you are to live, you must move with the times, and the times say advertise, and do it largely or it is of no use; and no matter how fulsome and unctuous, so long as you do not bring yourself under the Indecent Advertisement Act. And it is not necessary that you should observe the law in this case—as in many others now-a-days—you may evade it as much as you please, and the closer you can sail to the wind without actually bringing yourself within its grasp (such is the business morality of the day), the more clever you will be considered.

Then there is the old string upon which these men harp, and one to which the public is ever prone to lend a willing ear, I mean professional jealousy; the moment we attempt to explain the trash they see in print, we are met with the bugbear professional jealousy; they do not as a rule ask, with a view to know, but because they are anxious to explain to you their views, and how old-fashioned you are, or appear to be to them, and if you attempt to explain, you find it is of no use, as they have one fixed idea which nothing but a broken jaw or a big swindle will remove, and as the quack does not always fail, they have some successes "it must be remembered," or they could not, of course, stand their ground as long



as they do, and as no one likes to admit he has been swindled, or made a fool of himself, he holds his tongue and points to his neighbour who was more fortunate, so that individually our mouths are closed ; while quackery reigns supreme and the public themselves are unwittingly a party to the fraud, while the quack baits his hook, catches and devours his prey and leaves us to enjoy our respectability, and as we are conscious the public have an erroneous idea, we are behind the times in not advertising. We are supposed by them never to have heard of cocaine, or the so-called American bridge work, &c., &c. They are tinging to tell us of something new they heard of in London or America. I quote an instance :—

A clergyman consulted me about two bicuspid teeth he had stopped while in town. He had heard and seen advertised much about the bridge work, so he went to one of the American institutes to have a little bridge work done, which consisted of two bicuspid teeth considerably decayed on their approximal surfaces. A piece of Sullivan's cement was pushed in to join them together, and this was the bridge. I ventured to make a remark which was unfavourable to the operator and the operation generally, which I found was not agreeable, as he said, "I paid two guineas for it," and I found to press the matter further would place me upon uncomfortable terms with my patient, and realising the fact that no one likes to feel he has been a fool, and much less does he like to admit it to others or to be told so ; and I found also that if I did press the matter he would, in self-defence, feel obliged to praise up the beautiful bridge work for which he had paid the sum of two guineas, and which I so ruthlessly condemned and removed out of sheer professional jealousy ; but as the teeth became more comfortable, so the bridge that did not carry him safely over was forgotten ; and you know, gentlemen, we do not cap a nerve now, we bridge it. We do not pivot two or three teeth on a narrow plate now, it is American bridge and bar work that is moving with the times. This wonderful American dentist, I was informed, actually extracted nerves, but no reason could be given why it was not done in this instance. But the professional jealousy phase of the question is one of the many refuges under which these men take shelter and upon which they trade and we are misrepresented, and one from which we cannot defend ourselves. Now the subject of quackery, in whatever sphere of life, whether diplomatist, physician, sanctimonious adventurers in faith or morals, is rather extraordinary, and we ask how comes it then when men of sound sense, education, and learning seem to be in worldly matters more anxious to be deceived than enlightened. How can we explain it, except by the innate love of the marvellous and mysterious, that fetish idea that some one has really discovered the philosopher's stone and the power of granting a royal road to all they desire, and the credulity of the people upon this subject is most astounding, especially in matters connected with the healing art ; they

have a credulous belief without reason or an incredulous reason without belief, or a superstitious faith without either. There is an Eastern story of a certain prince who had received from a fairy the faculty of not only assuming whatever appearance he thought proper, but also of discerning the wandering spirits of the departed. He had long laboured under a painful chronic affection that none of the Court physicians in ordinary or extraordinary could relieve, so he resolved to wander about the street of his capital until he could find some regular or irregular quack, or otherwise, who could offer some chance of relief from his sufferings. For this purpose he donned the garb and appearance of a dervish, and as he was passing through the street in which the most fashionable physician resided, he was surprised to find it thronged with ghosts, so much so that had they been in the flesh they must have obstructed the thoroughfare. But what amazed him more than all was that they all grouped themselves around the door of his royal father's physician, haunting the man to whom they attributed their untimely death. Shocked at the sight he hurried to another part of the city where resided another fashionable physician but all the same the gateway was blocked with reproachful ghosts. Being thunderstruck with this discovery—with a feeling of satisfaction that he had escaped so long—he resolved to visit other physicians in the town, but all were alike—the number of ghosts corresponding to the size of their practice. Heart-broken and despairing of a cure, he was sauntering back to the palace through an obscure street, and on the door of a humble dwelling he read a doctor's name and one poor solitary ghost leaning his despondent cheek upon his fleshless hand and seated upon the doctor's step. "Alas," said the Prince, "it is then true that humble merit withers in the shade, while ostentatious ignorance inhabits golden mansions. This poor neglected doctor, who has but one death to count, is the only man I can trust." And accordingly he was consulted, and with a look of triumph he promised a speedy cure. And after a liberal fee had been paid, with great joy the poor doctor ventured to ask by what good luck, under what planet, had he been recommended to seek his advice. "Why," said the Prince, "do you ask so strange a question?" To which the worthy doctor replied, with tears in his eyes, "Because I consider myself the most fortunate man in Bagdad. I have been settled in this city fifteen years, and have only been able to obtain one patient." "Alas!" cried the Prince, "that must have been the one poor ghost I saw outside on the doorstep—that one patient died."

But to further illustrate this by an instance in our own day, and from a contrary point of view, we will take that man who has been travelling with a grand caravan extracting teeth, cutting corns, and lubricating the joints of the chronic rheumatic. An intelligent man of some means told me how much he had paid him altogether. I think he said he had rubbed in nine bottles, with the result that he

was able to walk for a week or ten days, but is now as bad as ever. I remonstrated with him, with his worldly knowledge, for employing such a quack and spending so much money for no permanent good. His reply was most characteristic of this view of what we are pleased to call credulity. He said, "I have paid hundreds of pounds to your regular doctors to no purpose, so I thought I would try an irregular one with the result of a few days' relief, and if your joints were stiff, and you could not walk without crutches, you would think as I do—think it cheap to throw them away, if only for one day or an hour. I would give it now to be able to walk down this street once more." Now I wish to point out that this fetish fascination on the part of chronics and others for an empiric kind of treatment in their extremity—such as we find in the educated as well as the ignorant—has a far deeper hold upon us than at first sight appears, notwithstanding the boasted civilisation of the nineteenth century. As legislation has failed us we are casting about for other means to effect the object in view, but when we speak of educating the public, we must remember it is a much more serious and gigantic business than we imagine. It means the rooting out of inborn superstition, credulities, and faith of our traditional history, which we can trace from the earliest history of mankind, and has become an essential part of our nature, handed down by our forefathers from time immemorial.

A consideration of this subject from this point of view will explain in some measure the reason the medical profession and its branches have not received that recognition and not been held in that respect by the public it deserves, or consistent with the recognition other professions receive at their hands, nor does it rank as high as the education requires of it would lead us to expect. The general gets promotion, and generally a good round sum for one campaign; a curate or rector a testimonial, and often a fat purse or a silver teapot from his grateful parishioners for a few years' service; a lawyer a judgeship and distinctions too numerous to mention; a doctor, if he happens to be a Sir William Gull, gets knighted and a wreath of flowers from the Prince of Wales to cover up his decaying bones, but as we cannot all be Gulls, what do the others get—what do we get for a life of anxious toil? We get our respectability to bequeath to our children, and the satisfaction of knowing we were considered not to have moved with the times. In times gone by the healing art was in the hands of the ecclesiastics, a remnant of which we see to this day in the village parson, who keeps his toothache elixir, his rhubarb, and his pills and syrup of squills, with which simple remedies and his faith-healing he doctors the bodies and the souls of the whole village.

The President here introduced an interesting review of the early condition of the healing art, which the exigencies of space prevent our inserting. After this he resumed as follows :—

I have observed that when we speak of educating the public, it is a

much more serious business than we think, for reasons I will endeavour to show. We can scarcely credit that at any time there could have existed men of sense and genius who believed in supernatural means of curing diseases. Yet such is the case even up to this day. The ancients divided their cures into the "lawful and the unlawful cures;" the lawful cures were obtained by divine aid, and the Papists had a poor sympathetic saint for every infirmity, such as poison, gout, ague, &c., and Pliny records a god for every disease, and some of the ancient writers on this subject give us a list of thirty thousand gods and goddesses, whose aid was invoked as their speciality was required. Later they were informed they were not to pray alone, or to take physic alone, but both together. We read that after the overthrow of Charles of Burgundy, the people were exhorted to pray with all submission and penitence, confess their sins, and then take physic. Doubtless the imagination had much to do with this, and we all know the influence on the nerve of an aching tooth when we arrive at the dentist's door. The sound of the bell acts as a charm, and we hear of many instances when it never returns in that particular tooth.

Many of us have heard of Prince Hohenhole, a divine healer by prayer; and it is related that a certain Miss O'Connor, a woman in a convent near Chelmsford, had a swollen arm for a year and a half, but no suppuration, though very painful, which nothing would relieve, though everything had been done that medical skill could devise at that time—1820. At last the Lady Superior, Miss Gerard, thought she would see what divine healing would effect, and accordingly she wrote—or got a friend to write—to the Prince. She was ordered certain things to do, but principally to pray, and after going through the religious process—and after mass being said—on a certain day, not finding the relief she expected in despair she exclaimed: "Oh Lord, Thy will be done! and since Thou hast not thought me worthy of this cure," when lo, immediately her faith had made her whole, and the Prince had cured her.

And so it is, as the poet Otway tells us,

" You want to lead  
My reason blindfold,  
Like a hampered lion  
Checked of its noble vigour;  
Then, when baited  
Down to obedient tameness,  
Made to crouch  
And show strange tricks,  
Which you call signs of faith.  
So silly souls are gulled,  
And you get money."

At the end of the sixteenth century great excitement was caused in Europe by a report that a golden tooth had appeared in the jaw of a

child born in Silesia. The rumour, on being investigated, was believed to be true and thought to be a mysterious omen, and great anxiety was felt as to what it might mean, which was afterwards unfolded by an eminent physician, Dr. Ghost ; and he explains, as the result of his researches, that at the birth of the child the sun was in conjunction with Saturn, at the sign Aries, and though the event was supernatural it was by no means alarming, as the golden tooth was the precursor of a golden age, in which the Turks were to be driven out of Christendom ; and even in our times we occasionally hear of faith-healing, the divining rod and the elixirs of the Carmelite monks.

The unlawful cures were obtained from sorcerers, witches, magicians, wizards, Agrippa's black dog—that caused him so much trouble that when dying, stung with remorse, it is stated, he removed the collar, which was studded with cabalistic nails, and cried, "Begone, wretched animal, that has been my curse," and the dog immediately ran away, and plunged into the river Soane, and the canine devil was never seen again.

Besides this, there were spells, cabalistic words, charms, images, amulets, augurs, ligatures, love philters, flagellation, incantations ; rings made from hinges of a coffin to cure cramps ; rusty old swords, old horse-shoes, nails driven into an oak tree for the cure of tooth-ache ; red strings round the arm to prevent the nose bleeding ; a black one to cause the teeth of children to cut through the gum without pain ; to steal pieces of meat, bury it, and as it decays for the cure of warts.

There is also the question of expense. A box of pills or a pot of ointment of wonderful reputation can be bought for a shilling ; to call in the doctor is another matter, and these patent medicines, it must be remembered, are not all made of bread :—

" Our bane and physic the same earth bestows,  
And near the noisome nettle blooms the rose ; "

some are of undoubted efficacy in certain troubles. Where is there a family that have not their patent domestic pill ? Then, again, people will spend any amount of money on quack remedies rather than face the knife or the forceps, and extol them unreasonably, while the real merits of the doctors are overlooked, and we constantly see a blind unreasoning confidence reposed in a quack who talks loud and glibly, while a man of real merit seldom extols his own good qualities ; but how seldom are they rewarded. When modesty places his light under a bushel, who is there in these days generous enough to bring it into view ? while the poet immortalises the name of

" Tom Pots, who was but a serving man,  
And yet he was a doctor good,  
He bound his 'kerchief on the wound,  
And with kind words he staunch'd the blood.

These are the kind of men we have to deal with just emerged from the bench, prepared to supply sets of teeth with all the latest improvements for one guinea per set. "You have only got to pop your head within side of the door," said the spider to the fly.

I think when we come to consider the question of educating the public from this point of view, when we come to consider that we shall have to deal with the still smouldering embers of all these ancient hereditary superstitions, credulities, faiths, witcheries, fraudulent priest-crafts, so intimately interwoven with the earliest history of mankind that has existed in all ages, and in all countries down to our own time, we shall be better able to realise what we propose to do and how to do it. We may take it for granted that when a man has a raging toothache, or is in pain from any cause—

"I pray thee peace, I will be flesh and blood,  
For there was never yet philosopher  
That could endure the toothache patiently,"

or suffering from an incurable disease which ordinary means have failed to relieve ; or, as in the case of the dentist, an empty exchequer, he will go to the quack, be he a genius or an ignoramus, physician or surgeon—it's all the same. Human nature is but human. Some precious stones take a higher polish than others, but they are stones after all. They are in extremities. The quack promises everything they desire, raises their spirits and bids them hope, and puts them in such good cue with themselves they fancy they really are cured, or better, and have obtained a fresh lease of life ; their family notice the improvement in their spirits ; soon the body sympathises and possibly there may be a temporary improvement. The quack is voted a great man, while the poor honest doctor, that has been bored with all the family's troubles, hopes and fears, is for the moment lost sight of. There is the demand, say, for the greatest remedy on earth discovered by Kehotah, the mighty Indian chief and medicine man in the Upper Mississippi Valley, and the supply is forthcoming, and before you can deal with the latter you must provide for the former. How is this to be done unless we all turn quacks to meet the demand ? And if we did, history would only be repeating herself in our day : —

"The world offers no law to make you rich,  
Then be not poor, but break it and take this ;  
My poverty and not my will consents."

But this would be making retrograde motion. I think, however, none of us will doubt that of late years advertising and quackery in every form is more vicious now than ever ; whereas they used to come as single spies, now they come in battalions, with one general on the register leading whole companies. Evidently legislation has failed us.

Buckle in his "History of Civilisation" tells us it would be easy to show how legislation in every attempt to protect a particular industry,

or to uphold some particular principle, has not only failed but brought about results diametrically opposed to the original intention and positively injured that which it intended to protect, and that any attempt to interfere with the freedom of the contract is to the disadvantage of both contracting parties ; for instance, if I have something I do not want and you do, and you, *vice-versâ* have something I want and you do not, we are bound to contract as between you and I first ; then as between you and I and the law ; then to contract as both out of the law, so that there is the risk of the law, and the risk of one of the party repudiating the contract, and in the case of many the borrower has to pay for the additional risk, and it is all the worse for both parties ; and though we cannot interfere with the freedom of any contract made between the patient and the quack, we can put the public in a position to make it equitable, in which case his trade would be gone. But let us remember that what one age asks as a favour, the next will demand as a right. What shall we then ask as a favour ? If we cannot do all we wish it does not follow we should do nothing. We have done much "and much remains behind," but I hold that whatever we do it should come from the highest authority—an authority interested only in the general good to the greatest number and not the individual, and that, like Cæsar's wife, must be above suspicion :

"Sooner shall jarring elements unite,  
Than truth for gain, than interest for right,"

and for that authority we look to the Representative Board of the British Dental Association. I remember this was brought up before the Odontological Society many years ago, and before the British Dental Association came into existence ; but it was then held that the Odontological Society, being purely a scientific society, could not deal with dental politics. But let me ask is the British Dental Association too proud to make any effort to cleanse its body from the parasites that so infest it as to threaten its very existence ? Or shall we, opossum-like, hide our heads in a hole and fancy our body out of danger ? There is no profession, trade or industry of any kind that has not similar difficulty :—

"All big fleas have little fleas  
Upon their backs to bite them ;  
And little fleas have lesser fleas, and so on  
*Ad infinitum.*"

What I suggest is this : We all know the difficulty we experience when being asked by a patient about some local quack who chatters and impresses people with his own importance. There have been many pamphlets printed to meet this necessity, but most of them anonymous, which lays them open to suspicion at once. I see there has been one issued by the Midland Branch of the British Dental Association, but I have long held the opinion that something of this kind should

come from the Representative Board of the British Dental Association so compiled as not to wound the susceptibilities of any of the members. The great fault of most of these pamphlets has been that they have been written from one position only, lauding up one and ignoring the other, and not acceptable to all; we want some short matter to put into the hands of our patients as occasion may require, instead of arguing with them to be able to say, "that is the opinion of the leading men in the profession; read it at your leisure." The collective opinions of all the best men in the country will be worth more than an individual one, and prevent the possibility of their arguing the point with you. I would propose that each branch should send up any suggestion they wish introduced to meet the necessities of their locality, and that the board should discuss them as they would the rules of any other association, only in this case it would be addressed to non-members instead of the members, and in the interest of the public rather than the profession, or at least sufficiently so to disarm the mind of interested motives.

One more question I would ask. Has the medical profession sunk so low that for a small fee they will meet any unqualified or tyro that chooses to apply for assistance in anæsthetic cases qualified, registered or not? I am happy to say I know many instances where medical men will not meet a quack in the dental any more than they would in the medical, and they explain this to their patients.

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### Notes on the Application of the Rubber Dam.

By JAMES F. COLYER, L.R.C.P., M.R.C.S., L.D.S.Eng.

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OF all the means at present in use for the exclusion of saliva the rubber dam is by far the most perfect, and a great deal of practice is required before one is able to quickly and accurately apply it to the mouth. To facilitate the description of this operation, I shall first consider some general points, and then, in further detail its application to front and back teeth.

*Class of rubber dam to use.*—In the choice of rubber several points have to be taken into consideration. Elasticity, extensibility and freedom from smell are essential properties of good rubber.

Of the makes with which I am acquainted, that known as the "Velvet Brand," manufactured by the Davidson Rubber Company, appears to be as serviceable as any. It is usually sold in strips, varying in width, and is put up in tin canisters, which preserve it



from moisture and the action of the air. The medium thickness is the best for use.

*Punching Holes for the Teeth.*—Various methods are in vogue. The first and simplest is to stretch the dam over the end of an excavator, and then to touch it a short distance from the extremity of the instrument with a pen knife, when a small round disc will fly off. This is a fairly useful method, and a little practice will soon enable an operator to control the size of the perforation.

Another method is to fold a piece of rubber into four, so that the point of folding coincides with the position of the required perforation, and to cut off the corner with a small pair of scissors. By this means a hole is cut, which although not truly circular, is very useful for all practical purposes.

Lastly, perforations may be made with punches specially manufactured for the purpose; this method is by far the most perfect. The best form of punch is that known as "Ainsworth's," and is shown in Fig. 1.

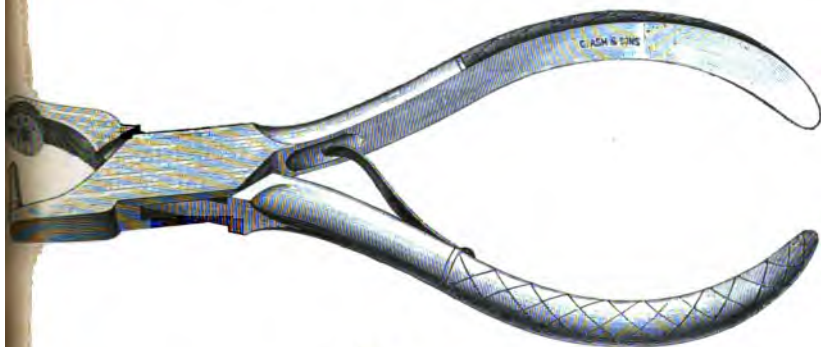


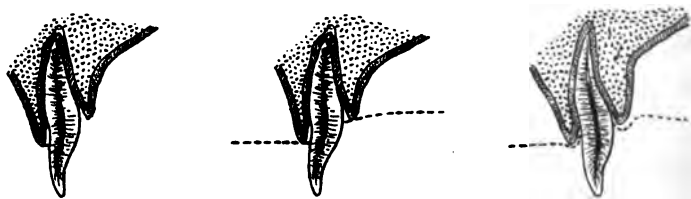
FIG 1.

*Position of Perforations.*—In applying the rubber dam to back teeth a little trouble is at first experienced in gauging the correct position to punch the hole. This difficulty may be readily overcome by placing the rubber over the mouth, and marking roughly where it comes over the teeth you wish to encircle.

*Distance between and size of the Perforations.*—With molars the holes should be about  $\frac{3}{32}$  inch in diameter and  $\frac{3}{8}$  inch apart from one another, whilst with bicuspsids, and incisors they should be about  $\frac{1}{16}$  inch in diameter and  $\frac{1}{4}$  inch apart from one another.

*Number of Teeth to which to apply the Rubber.*—With a purely crown cavity the rubber may be simply applied to the single tooth, but with an approximal cavity the application must be extended to the tooth approximal to the cavity.

*Tucking the Rubber under the edge of the Gum.*—This is most important, firstly, because it prevents the rubber slipping; secondly, because it prevents the saliva dribbling down between the rubber and the tooth.



FIGS. 2, 3 and 4.

The accompanying diagrams illustrate this point, and it is one on which too much stress cannot be laid.

The drawings are supposed to represent an antero-posterior section of a lateral *in situ*. In Fig. 2 is shown the method of attachment of the gum to the neck of the tooth; in Fig. 3 the way in which the rubber is applied when this point is not attended to, leading as before stated, to the rubber slipping, and to the escape of saliva.



FIGS. 26 and 27.

Fig. 4 on the other hand represents the rubber as applied to the tooth after this point has been attended to. In accomplishing it we either use a blunt instrument such as a burnisher, or pass the silk—the former is sometimes quite sufficient, but generally the latter has to be employed. (The manner of passing the silk will be detailed later on.)

*Clamps.*—Of these there are an endless variety, the most generally useful being the “festooned” molar and bicuspid introduced by Dr. Tees and shown in Figs. 26 and 27, and the molar and bicuspid clamps designed by Delos Palmer, illustrations of which are shown in Figs. 106, 107, 108, 114, 116.



FIGS. 106, 107, 108, 114 and 116.

For erosion cavities the most useful are the Johnson lever clamp and Dr. St. George Elliott's, which latter is shown in Fig. 7.

In Figs. 39, 43 and 45 are represented clamps which will be found useful when operating on distal cavities in isolated teeth.

A point of some importance in applying rubber to teeth having approximal cavities is this : to be sure that the cervical edge of the

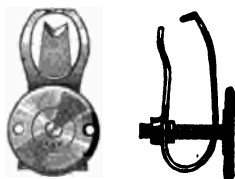


FIG. 7.

cavity is defined ; should the gum have encroached at this point, it will be needful to drive or slough it away by means of a little “Potassæ cum Calci” or “ethylate of sodium” applied on cotton wool, a little gentle pressure being used at the same time.

Sharp edges are sometimes met with, and are a source of great inconvenience when passing the silk ; these should be removed if possible before the application of the rubber is commenced. Lastly, when the tooth to be operated on is coated with tartar, it is always best to remove this before commencing to use the rubber dam.

Having now passed briefly in review some general points, I will next describe its application in further detail, and for convenience divide it into :—

- (1.) Application to front teeth.
- (2.) Application to back teeth.

*I.—Application to front teeth.*

This is best accomplished in the following manner:—Take a piece of rubber of the necessary size and pierce the number of holes required, taking special precaution to have the space recommended between them. As a general rule, it will be found advisable to include at least three teeth in the rubber. Holding the rubber between the fingers and thumbs of both hands, stretch it over the required teeth, commencing at one end and passing it over the remainder in order.



FIGS. 39, 43 and 45.

Should the teeth be placed close together, a little difficulty may be experienced in passing the rubber between them. This may be best overcome by drawing up a strand of silk, which will carry the dam up before it between the teeth. This operation completed, apply the retractors, and should the rubber not lie easily over the lower lip, attach weights to either corner.

The next step is to pass the silk in order to "tuck the dam under the edge of gum" as before explained. An easy, quick and effective method of doing this is as follows, and a reference to the accompanying diagram will greatly assist in following the description (it being supposed that there is a cavity on the distal side of the left central).

First, take the silk between the thumb and first finger of the right hand and the thumb and first finger of the left, and pass it up between the centrals, leaving it there; repeat the same on the side approximal to the lateral, having the free ends of silk in front and the loop behind.

Next take the free ends between the thumb and first finger of

the left hand and draw them well forward; at the same time by means of a burnisher guide the loop up behind the free edge of enamel, still pulling the ends well forward. (Fig. 9.)

Next hold the end (*a*) in the left hand in a direction slightly upwards and pass the end (*b*) over it, and then still holding (*a*) as described, bring (*b*) between the centrals, using traction in a direction downwards and backwards. (Fig. 10.) Then either cut the ends off short and leave the silk in position or remove it altogether—the former, I think, is preferable; this proceeding, viz., passing the silk being carried out on every tooth over which the rubber is stretched.

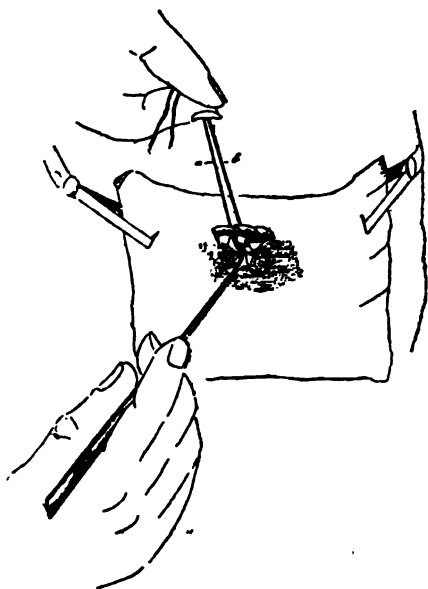


FIG. 9.

In some cases, especially of conical teeth, the above method is not always sufficient to prevent the rubber from slipping. This may sometimes be overcome by passing the end (*b*) as directed over (*a*), then bringing it up again between the central and lateral, and over (*a*) once more; then applying traction as before directed (by this means you get a double strand of silk surrounding the tooth).

Another method of overcoming this tendency to slip is to apply an ordinary clove hitch. This is made as follows :—Fold the piece of waxed silk as shown in Fig. 11, next simply pass, not fold, the loop (*c d*) in front of loop (*a b*) as shown in Fig. 12, then apply to tooth by taking the double loop well up behind the neck of the tooth, and applying traction alternately on the ends. (Fig. 13.)

A rather better knot than this for holding is shown in Fig. 14. It is made as follows :—Fold silk as shown in Fig. 15, next fold not simply pass the loop (*b c*) over (*d a*) (Fig. 16). Then take (*c*) and twist it round so that it comes posterior to (*a*), getting the loop as illustrated.

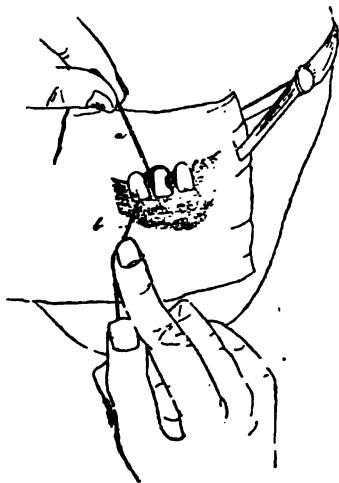


FIG. 10.

This knot is applied in exactly the same way as the clove hitch ; it is rather more trouble to make, but certainly more effective in use.

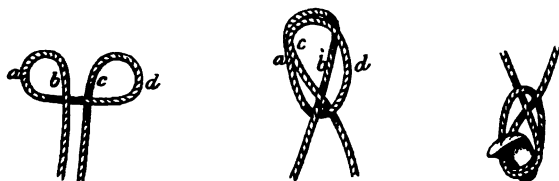
It is important to remember that, in every case, the silk should be passed and the knot tied, or the twist made, on the side of the tooth away from the cavity, the reason being obvious.

## II.—*Application to back teeth.*

In the application of the dam to back teeth, it is generally, necessary to use a clamp, and if the rubber is being applied to

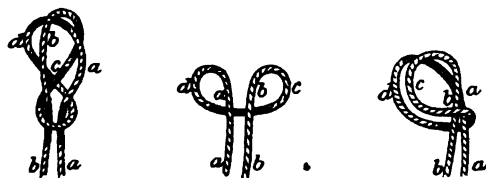
more than one tooth, the clamp should be always fixed on the most distal one. The use of a clamp prevents the cheek and tongue drawing off the rubber when *in situ*, and affords a better view of the cavity.

When using the clamp two methods are open to the operator :—



FIGS. 11, 12 and 13.

(a) The clamp may be applied, and the dam stretched over it, this method being handy where small clamps are being used. Or, (b) the clamp may be passed through the perforation in the rubber, and, having placed it in position on the tooth, the rubber may be gradually insinuated over its edges with the first fingers of either hands.



FIGS. 14, 15 and 16.

Having then by one of these methods adjusted the clamp, stretch the rubber over as many teeth as are required, using silk, if necessary, to pass it down the interstices. Apply the retractors, and pass silk round all the teeth, including the one on which the clamp is placed. This latter is necessary since the clamp does not cause the rubber to tuck under the gum, and hence, should the silk not be passed, a possible cause of leakage is left. It is best effected in the following manner :—Place the silk behind the clamp, and bring the end which is towards the inside of the

mouth under the palatal or lingual flange, as the case may be, and then pass it between the approximal surfaces of the teeth in front. Repeat this operation with the other end by passing it under the buccal flange and also between the approximal surfaces. Now apply traction to end passing under palatal or lingual flange in an outward direction, and to that under buccal in an inward direction (Fig. 17 illustrates this point). Then cut off the



FIG. 17.

ends of silk or remove it altogether. In applying silk to the remaining teeth, practically the same methods as adopted for front teeth are employed.

Whenever the rubber is employed, it will always be found useful to use the saliva-pump in connection with it, the latter adding considerably to the comfort of the patient. It is also useful to place a napkin between the rubber and lower lip, carrying the ends upward underneath the vulcanite portions of the retractors, thus avoiding the temporary mark which they occasionally leave on the patient's face.

In conclusion, I wish to express my gratitude to Mr. Phillips for the excellent drawings from which some of the illustrations have been made, and to Messrs. Ash and Sons for the loan of some of the blocks.



**Anæsthetic Mixtures.\***

By WILLIAM J. STEPHENS, L.R.C.P.

HON. PHYSICIAN TO THE BRIGHTON AND HOVE DISPENSARY, ANÆTHETIST  
TO THE BRIGHTON DENTAL HOSPITAL.

GENTLEMEN.—The notes I bring before you this evening are brief and imperfect as my time and opportunities have been very limited.

I first want to draw your attention to the combination of oxygen with nitrous-oxide, which Dr. Hewitt brought before you at the Association meeting last summer. Since that time I have administered it in 52 cases, but as I constantly varied the percentage of oxygen used, and also the amount of pressure, I am not yet prepared to draw any conclusive deductions.

I administered it from an ordinary gasometer, passing in first the oxygen, and then the nitrous-oxide in the required proportions, and when extra pressure was used, I added weights to the top of the gas holder.

The administration was then conducted in exactly the same manner as when using simple nitrous-oxide, but the symptoms produced differed greatly, and the period of inhalation before anæsthesia took place was very considerably longer.

After a few inhalations of nitrous-oxide gas we get :—

A certain amount of discolouration, jerky and irregular breathing, stertor, dilatation of the pupils, and the pulse (which at first is accelerated) becomes smaller and slower.

But with a mixture of oxygen and nitrous-oxide—

There is no cyanosis (in fact the patient looks the picture of health), no jerky and irregular breathing, no stertor, only very slight enlargement of pupils (hardly noticeable in many cases), pulse full, soft, regular, and slightly quickened.

Just as there are a small percentage of cases in which nitrous-oxide does not produce very satisfactory results, so there are cases where this mixture appears to fail. But I fancy these will be in extremely small proportion when we know exactly the percentage of oxygen to use in each case.

In my first series, I followed Dr. Hewitt's plan, and administered  $\frac{1}{4}$  of oxygen, and  $\frac{3}{4}$  of nitrous-oxide, under a pressure of 5 lbs.

These cases gave very fair results, the anæsthesia lasting certainly

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\* Brief notes read at the Brighton Dental Society.

longer than with simple nitrous-oxide, an average of about 10 gallons of gas being used for each case.

In my next series of cases, I used the same proportions of the gasses but diminished the pressure to 4 lbs., then to 3 lbs., 2 lbs., and 1 lb., and as I diminished the pressure, so the period of anæsthesia appeared to be shortened.

After this I resolved to test a few cases without using any pressure, but varying the percentage of oxygen.

I first tried  $\frac{1}{2}$  of oxygen, and then gradually decreased it to  $\frac{1}{12}$ , and in all these cases the results were certainly not as good as when pressure was used, the anæsthesia lasting in most cases a very short time. Those cases which gave best results *without* pressure being those apparently in which a large percentage of oxygen had been given.

Out of all these cases I had only one patient who could not be anæsthetised, this being a woman to whom I gave  $\frac{1}{2}$  and a  $\frac{1}{10}$  of oxygen without any pressure. I then gave her a mixture containing  $\frac{1}{4}$  of oxygen, under a pressure of 5 lbs., but this also failed to produce the desired result.

When next she came to the hospital, I gave her simple nitrous-oxide, and after administering an unusually large quantity, the anæsthesia only lasted a very few seconds.

In five cases sickness occurred after administration, but in all these it happened where a large percentage of oxygen had been used.

It is in anæmic cases that this mixture gives the greatest satisfaction, and for which it appears particularly adapted, for often in marked anæmia, nitrous-oxide is not well taken, but the mixture, as far as I can at present judge, gives the very best results. In future I shall give rather a larger percentage of oxygen than  $\frac{1}{8}$  in all anæmic cases.

The advantages of this mixture appear to me to be that there is—

No cyanosis.

No difficulty of breathing, stertor, or asphyxial symptoms.

Lengthened period of anæsthesia, and its probable safety especially in pulmonary or cardiac disease.

Its disadvantages (which certainly are not of very great importance), are the large quantity of gas used to produce anæsthesia, slight giddiness on recovery, the possibility of sickness in a few cases, and the difficulty of getting it into a portable form for ad-

ministration in private practice. Dr. Hewitt's being the only apparatus with which I am at present acquainted.

My impression is that to obtain full advantage of this valuable anæsthetic, we must vary the proportions of oxygen to the requirements of each particular case, for instance, increase it in cases of anæmia, and perhaps in cases of pulmonary disease, it would be better to use but a smaller percentage. I mean that no fixed percentage of oxygen will answer equally well in all cases.

Now, gentlemen, I want to draw your attention to a combination of A. C. E. with nitrous-oxide as an anæsthetic mixture. I believe it to be a new combination, and one which, as far as I have been able to test, appears to give very satisfactory results, but I shall hope after giving it a more extended trial, to bring it before your notice again on some future occasion.

All of you are accustomed to the use of ether with nitrous-oxide, and what I have done is to substitute the mixture commonly known as A. C. E. for the ether, as to my mind, there are several objections to the use of ether, especially in dental operations.

In the first place its odour being so strong makes it somewhat objectionable in private practice.

Secondly—It often irritates the respiratory passages and causes cough. And frequently its administration is followed by a feeling of nausea; also if much of its vapour be given, there is sometimes giddiness, followed by vomiting.

My idea in using this combination is to avoid the unpleasantness caused when using ether, and yet to be able to prolong the period of anæsthesia as far as is consistent with the safety and well-being of the patient.

A small quantity of A. C. E. is placed in a receptacle made for me by Messrs. Rutterford and Sons, which differs from the ordinary ether apparatus in size, shape, and also in its not having any water jacket.

Its size and shape make it convenient to hold in the palm of the hand, the warmth of which furthers the evaporation of the A. C. E.

In extremely cold weather the receptacle might be dipped in hot water before using, but I have never yet found this necessary. This receptacle is then fitted between the stop-cocks and the face piece, and the gas bag attached to the bottle; then by rotating the foot piece of the bottle the gas is admitted to the gas bag ready for use in the usual manner.

With the full details of administering I shall not trouble you, as the administration is conducted in exactly the same manner as with ordinary nitrous-oxide, excepting that after five or six respirations have taken place the stop cock of the receptacle is very gradually turned from zero to 1, 2, or 3, as may be thought necessary, by which means a portion, or the whole of the gas can be made to pass over the mixture.

The administration is then continued until the symptoms of nitrous-oxide narcosis are produced, for it is the nitrous-oxide that produces the anæsthesia, and the addition of the vapour of A. C. E. only prolongs its effect.

I have used it in about twenty-five cases at this hospital and in sixteen private cases, and in all these I have been pleased with the results. I have not yet been able to time accurately the period of anæsthesia that it will give during which an operation can safely be performed, but I think I am well within the limit when I say that in *all* cases it will give more than double the time of nitrous-oxide. This, I must mention, is without allowing any re-breathing into the gas bag, although if towards the close of the administration re-breathing is allowed, the anæsthesia is still further prolonged. But this re-breathing, I think, should always be avoided if possible, for although it certainly prolongs the anæsthesia it cannot be a strictly hygienic procedure, there being no satisfactory means of cleansing the bag after each patient.

Comparing it with ether it certainly is not as liable to produce sickness; in fact, out of forty-one cases, vomiting only occurred once and in that case I have every reason to believe that it was due to another cause. It does not irritate the air passages and cause cough.

If carefully used the patient is not aware of having taken anything *but* gas. Its after effects, I may say, are nil, as I have never seen any more unpleasant symptoms than after the administration of nitrous-oxide.

I am fully aware that theoretically this combination may be open to the usual objections raised against A. C. E., but practically I find the results to be uniform and good; but before arriving at any definite conclusion I am fully conscious that I must give it a far more extended trial.

I must add, that where an operation will probably be of short duration only: say, the extraction of *one* or *two* teeth, then there can be no doubt that ordinary nitrous-oxide should be used, but

wherever the operation is likely to extend beyond the ordinary limits of nitrous-oxide narcosis, then I hope the mixture I have been testing will be found of value, and will to a *great extent* do away with the necessity of deeper anæsthetics being used in dental surgery, surrounded as they always must be with greater anxiety, both to administrator and operator.

I have several times administered this combination when as many as seven and eight extractions have been made, and on two occasions as many as nine. I hope, Sir, that you and the members of this Society will give me the benefit of your criticisms, for being experienced operating dentists, I shall value any suggestions that will assist me in my future work.

The PRESIDENT (Mr. Redman) then opened a discussion, and remarks and suggestions were made by Mr. Welch, Mr. O. A. Fox, Mr. Caush, Mr. Norris and others.

Mr. STEPHENS briefly replied, and particularly mentioned that the mixture of A. C. E. and nitrous oxide could not be considered a dangerous anæsthetic, as he had frequently started an administration with as little as one drachm and a-half to two drachms of the mixture (which only means thirty to forty minims of pure chloroform), and even the whole of this quantity was never used.

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### Artificial Nose.\*

BY H. N. GROVE, L.D.S., WALSALL.

THE disfigurement in this case was brought about by lupus, which made its first appearance early in the life of the girl. In the year 1882 the patient was successfully operated upon by Dr. Elkington at the Children's Hospital, Birmingham.

The *modus operandi* is as follows:—Let the patient be placed in the horizontal position, smear the face with olive oil, loosely plug the nares with cotton wool, hammer a piece of sheet pewter to form a flattened tube for the patient to breathe through, rapidly encircle the head with a large towel, then quickly but confidently pour the plaster of Paris mixed with tepid water over the face of the patient. Now cast about for a suitable nose and model same from life in plaster of Paris, reproduce in bees wax, contour and fashion it

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\* Read before the Central Counties Branch, Birmingham, March 20, 1890.

to the face, but previously lay some strips of pink modelling wax on the plaster cast of the face so as to form a centripetal flange at the base and perimeter of the wax nose. This should now be



From photographs by Mr. Draycott, Walsall.

made in pink vulcanite, then smear the flange of same with gum mastich dissolved in absolute alcohol, by which means the nose is securely attached to the face. Now make up with pink flesh

paste, paint in oil colour to match the complexion, and finally dust over with powdered French chalk to take off the glaze.

The spectacles do not in any way assist in securing the nose to the face, but the bridge plays a useful part in concealing the most prominent line of union, and thereby contributes materially to the deception.

The experimental noses were secured to the face by means of a thin accurately fitting skin of rubber, made by dipping a malleable iron model of the nose in a flesh-tinted solution of rubber, using bisulphide of carbon as the solvent; but this lacked an artistic appearance on account of the outside rim or flange of attachment being shown on the face, whilst the method previously described (whereby the inside rim or flange was out of sight) was found to allow the better contouring of the nose, and thus to prevent any appearance of angularity between the nose and the face.

I am about to further experiment by substituting a porcelain nose in place of the vulcanite, as the painting would then be fired, fixed, and permanent.

The nose referred to in these notes was adjusted in November, 1888, and the patient exhibited on March 20th this year, at a meeting of the Central Counties Branch, held at the Dental Hospital, Birmingham.

It almost goes without saying that the artistic effect of the work was rendered none the less easy on account of the congenital hare-lip and cleft palate.

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## LEGAL INTELLIGENCE.

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### Kendal County Court.

Monday.—(Before the Registrar, R. F. THOMPSON, Esq.)

HOWE v. CRAWFORD.—This was a claim for £1 1s., made by Mr. Howe, chemist, of Stramongate, against Mrs. Crawford, in respect to false teeth. Mr. R. B. Wilson appeared for the defendant. The case was partly heard by the Registrar at the last Court, but was adjourned in order that the plaintiff might have an opportunity to call scientific witnesses to show that the teeth were a good fit. The defendant called Mr. Henry Atkinson, dentist, who said that on Friday, December 6th, Mrs. Crawford came to him, and asked him to examine the teeth produced, which she

took out of her pocket. He took a model of her mouth, which he produced. The teeth would not fit it, and were utterly useless. By the plaintiff: I am positive it was on the 6th December. I have since supplied the defendant with a larger set of teeth. The defendant was then sworn, when she said the plaintiff tormented her for twelve months to have some false teeth. She ordered some, and got them on October 30th last year. While she was eating a piece of toast after she had them a fortnight, the teeth broke. Witness then took the teeth to the plaintiff, and told him she might have been choked with them. He said, "Who the —— would eat toast with false teeth?" Witness replied that she did not get the teeth for ornament, but for use. They never fitted her mouth. Plaintiff said he was a properly qualified dentist. Mrs. Gill said that she was in the defendant's company when she got the teeth on October 30th. When she put them in her mouth she could hardly speak. Another witness was called who was present when the teeth broke, but the plaintiff said it was not necessary to go into that as he admitted that the teeth were broken. He then called his daughter, Minnie Howe, who said that she took the teeth to the defendant on December 17th, when they had been repaired. Mrs. Crawford said she would have a new set in the new year, and would pay for them. The Registrar said that inasmuch as a qualified dentist had been called, and had sworn that the teeth were useless, as the defendant had said, he did not think the plaintiff was entitled to anything for the teeth, and he would therefore have to enter a verdict for the defendant with costs. —*Kendal News*, March 15th, 1890.

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### City of London Court.

March 11th.—(Before Mr. Commissioner KERR).

A BARRISTER AND HIS DENTIST'S ACCOUNT.—GABRIEL v. WOODGATE.—Messrs. Gabriel, dentists, of 72, Ludgate Hill, sought to recover the sum of 4½ guineas from the defendant, Mr. Walter Bradford Woodgate, barrister, of 1, Cloisters, Temple, for professional services they had rendered him from time to time. The plaintiff's manager said the defendant promised to pay, but Mr. Woodgate stated that that was not true. He denied his indebtedness, and as it was oath against oath, the case was adjourned until April 11th, for trial by jury.—*City Press*, March 19th, 1890.

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## HOSPITAL REPORTS AND CASES IN PRACTICE.

### Chorea and Pregnancy with Dental Irritation.

By W. BOWMAN MACLEOD, L.D.S.

ON the 5th of March last I was called in consultation by Dr. Armour to consider the possibility of making an apparatus which would prevent a patient in the Royal Infirmary (under the care of Dr. Halliday Croom) from biting her tongue. The patient, a married woman, aged twenty-nine, was about two months pregnant, and suffering from a very severe attack of chorea. On going over to the Infirmary, I found the patient in most violent and continual movement. With some difficulty I managed to keep her head sufficiently steady to examine her mouth and take impressions.

The examination disclosed many diseased teeth and roots, amongst which were an upper molar, right side extensively decayed, and with ragged edges. I suggested its immediate removal as it was beyond restoration, and was fraying the tongue very much. Consent being given, the tooth was extracted, and returning on the Saturday with the shield or tongue protector, which I had prepared in the interval, I was agreeably surprised to find the patient considerably improved. Under these circumstances I made a more careful examination of the mouth, and found several of the stumps upon pressure induced reflex spasm. This, in conjunction with the great good that had followed upon the extraction of the molar, caused me to suggest that further good might follow the removal of the stumps. The patient consented, and Dr. Armour having administered chloroform the mouth was cleared of all roots.

I visited her the following forenoon and found her resting quietly in bed, the only motion remaining being a slight and occasional contractile movement of the right hand.

The following precis which has been kindly furnished by Dr. Armour gives a concise and graphic history of the case.

Mrs. Catherine Finlayson, æt. twenty-nine, admitted 26th February, 1890. Complaint—wriggling movements.

*History.*—Amenorrhœa since December. New Year: Facial movements began; next, arms affected. February 9th: Some teeth drawn; after which movements increased. Able to go about till February 20th; since then, sleep and speech have

nearly gone; movements very violent. Married four years. This is fourth gestation. First and second were abortions; chorea slight. Third, full-timed healthy child; chorea slight all the time; child born November, 1888. Morning sickness with other gestations; not with this. History of nervousness; of bad teeth since girlhood; no rheumatic fever, &c.; no previous history of chorea; of convulsions; none of worms.

*On Admission.*—(1) Nutatory and rotatory movements of head; irregular uncoordinated twisting movements of occipito frontalis and corrugator supercilii, frequently; levator palp. sup. (semitosis mostly), seldom; motores oculi, never; pupils, normal; levators anguli oris, alæque nasi, and orbicularis oris, frequently and vigorously (peculiar bestial expression about mouth); tongue frequently protruded mesially; much bitten by teeth; jaws frequently lowered and closed with snap. (2) Erector spinæ, frequently; thoracic and abdominal muscles, irregularly; occasional opisthotonos.

*Right Arm.*—Every conceivable movement at each joint.

*Left Arm.*—Same; much less.

Occasional extension (of foot) and dorsiflexion of toes. Grasp diminished in both hands; most in left. Patient can stand; swallow liquids; cough; no dyspnœa. Co-ordination much impaired; reflexes not exaggerated.

*Speech.*—Very defective in articulation; no true aphasia; occasionally blurts out a sentence. Hears and understands all said; sensibility perfect.

*Heart.*—Thumping first sound in mitral area; accentuated pulmonary second.

*Pelvis.*—Pregnancy two to three months.

*Treatment.*—February 26th: Egg flip,  $\mathfrak{z}$ 120, daily; sulphonal gr. xx., 5.30 p.m. daily; Henry's solution,  $\mathfrak{z}$ ss. at 4 a.m.; enema if required. March 1st: Paraldehyde,  $\mathfrak{z}$ vi., pot. bromid. gr. 60, given at night; sleep secured in twenty-two minutes. March 5th: Prolonged sleeps secured by continuation of treatment of March 1st. Mr. Macleod removed an upper molar on right side. March 6th: A good day; slept, after usual dose of paraldehyde, thirteen hours and forty minutes out of twenty-four hours. Comparatively little movement to-day. March 8th: Mr. Macleod removed numerous roots to-day under chloroform; up till then patient's movements were exceedingly slight and nearly confined to right upper limb; since teeth-drawing, movements have been more exaggerated. March 9th: Again patient is very quiet.

March 14th: Speech now good and movements hardly present at all, and only in flexors and extensors and interossei of right hand. Presystolic mitral evident to-day; pulmonary accentuation marked. No paraldehyde required since night of 5th; sulphonal continued; liq. arsenical  $m$  9, daily given since March 4th; soup, chicken and fish added to diet since March 9th.

The patient continued to improve and soon recovered from the exhaustion following her violent exertions. She was discharged on the 5th of April with every prospect of continued good health and a full time delivery.

There can now be no doubt that dental irritation was associated with pregnancy in the causation of the St. Vitus' dance in this particular case, and I believe there is a somewhat similar one reported by Dr. Ellis of London. This being so suggests the question—Is St. Vitus' dance in children ever caused by defective teeth or by retarded or difficult eruption?

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### Union of Roots of an Upper Second Molar with Dens Sapientiae.

By G. HENRY, L.D.S.E.

An interesting case of union of the roots of a left superior second molar with those of the wisdom tooth has come under my notice, and I have now the pleasure of exhibiting the specimen.

When the patient, a female, aged thirty-three, requested to have the wisdom tooth extracted, she having suffered from it for about twelve months—ever since its eruption—the tooth was scarcely visible, as it pointed backwards from the tuberosity towards the throat.

Gas was twice administered, but with fruitless attempts to move the tooth. It then occurred to me to grasp the second molar buccal roots with a pair of Reed's forceps, when, after some determined humouring, the specimen before us came happily away.

In order to ascertain the true nature of the union, we intersected the teeth with a hair-saw, with the satisfaction of finding more than a mere cemental connection. Indeed, organic union must have taken place during the development of the roots, arising from the coalescence of the adjacent germs. On a nearer examination, there appears to be a fusion of the apices of the buccal roots of the second molar with the body of the wisdom

tooth, at and above the mesial bifurcation of its roots, and, in the larger half of the bisection, the fusion of the dentine of the two teeth appears determinable with the aid of a pocket-lens.

Since the apices of the second molar roots are completely imbedded, it is presumable that there is a blending also of the pulp-canals, terminating in the single root extremity.

If our conclusions are correct, it is clear that such a union could not possibly have been induced by a pathological process after the completed and separate development of the roots of the teeth.

From Dr. Wedl's pathology I gather that such unions are rare occurrences, and that, out of nineteen cases mentioned by Professor Heider, two only apply to the blending of the second upper molar with the wisdom tooth.

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### **More Extractions under Hypnotism.**

BY J. G. WALLIS, L.D.S.GLAS. AND IREL.

As a supplement to the letter of Mr. Turner which appeared in the JOURNAL for March, perhaps the following notes upon a few recent extractions may be of interest, the patients being put into the hypnotic sleep by Mr. Sherwood, of Goole.

I may premise these notes by stating until the time of the operations I had no faith in hypnotism or mesmerism as a means of rendering people insensible to pain, and that in each operation care was taken to have as satisfactory and fair a test of the hypnotic power as possible.

The patients were questioned after the extractions by medical and other friends, who were assured that no pain was felt excepting in the third case. Here the patient admitted feeling slight pain during the extractions of three out of the nine teeth.

During the operations the patients were quite under the control of the hypnotist, Mr. Sherwood; their mouths were gagged, they rinsed and emptied their mouths, &c., at his command without being awakened from the hypnotic sleep. The hypnotic sleep was speedily induced and as speedily removed. There was an entire absence of sickness or nausea, and of any other unpleasant effects, the patients being bright and cheerful immediately they returned to their normal state.

An advantage in these operations is that they can be performed

in any operating chair. The patients are not required to be in a recumbent position as when an anæsthetic is administered.

*Case I.*—Mr. A——, age twenty-three. Extracted upper bicuspid (right), left lower molar and two molar stumps. No conjunctival reflex action; slight muscular twitchings.

*Case II.*—Miss B——, age eighteen. Six upper molar stumps extracted and two lower molars. No conjunctival reflex action. This was a good test, the stumps being firmly impacted in the alveolus were difficult to extract.

*Case III.*—Miss C——, age thirty-three. Right upper bicuspid and first, second and third molars; right lower canine; first and second bicuspid and left molar stumps. Slight pain felt in three extractions.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

### Students' Society of the National Dental Hospital.

THE last ordinary meeting of this Society was held on Friday, March 7th, at 8 p.m. P. W. GREETHAM, Esq., President, in the chair.

The minutes of the previous ordinary meeting were read by the Secretary and confirmed.

The Misses Brierly and Mr. Schelling were present as visitors, and received the usual form of welcome from the President.

### CASUAL COMMUNICATIONS.

Mr. E. G. Carter showed the model of a mouth having a supernumerary tooth in the position of the left upper central, which was, however, in range, though pushed very much on one side. Mr. Carter also showed some trays for crown work.

Mr. Clements exhibited a lower canine tooth having two roots.

Mr. Perks showed a malformed second upper molar, also the model of a patient's mouth illustrating arrested eruption. The patient, who is forty-five years of age, has only quite recently erupted her left upper canine.

Mr. Rushton read a communication from Mr. Lankester relative to the system of teaching dental surgery in Philadelphia.

The PRESIDENT then called on Mr. Keevil for his paper, entitled "The Physiology and Treatment of Sensitive Dentine," in the course of which the author, after briefly touching upon the structure of dentine, and the respective theories of Tomes, Boedeker, Salter and Boll, regarding the termination of the nerves of the pulp and the ductinal fibres, passed on to consider the variations of sensibility of dentine at different ages, and its uses as far as is known. Mr. Keevil then proceeded to consider the causes of the pathological condition of hyper-

æsthesia, giving preference to the theory of inflammation, and remarked on the assertions of Bell and others that "distinct red patches" had been found in the dentine of teeth removed on account of excessive pain, and also that in the case of death from jaundice the dentine of the whole dentition had been found of a deep yellow colour, proving the capability of dentine for infiltration. Note was also made of some cases in which a highly nervo-sanguinous temperament was accompanied by an exquisitely sensitive state of the dentine. The third part of the paper was given up to the consideration of treatment, in which a brief outline of the apparent action of the various drugs and applications mentioned served to conclude a very interesting paper.

A discussion followed, in which Messrs. Allnutt, Humby, Perks, Rushton, Ritson, and the President took part, and a hearty vote of thanks having been accorded Mr. Keevil for his able paper, the meeting adjourned until Wednesday, April 2nd.

CHAS. H. ALLNUTT, *Hon. Sec.*

## MINOR NOTICES AND CRITICAL ABSTRACTS.

### Professional Atmosphere and Morals; or Patents and Secrets v. Liberal Profession.\*

By HORATIO C. MERIAM, D.M.D.

HARVARD UNIVERSITY DENTAL SCHOOL.

WHO would have expected that Dr. Rollins, one of the brightest men who has been graduated from the dental school at Harvard, could have written what I shall presently quote, and still less that it should have passed uncontradicted by any dental school or society in America?

"So long," he writes, "as members of the profession who patent their inventions and make money on them are honoured to the highest extent in our power by being asked to be leaders in our schools and before societies, so long will dentistry remain a trade, and I for one shall be ashamed to use my dental degree."

Is not dentistry in a position to resent this? Resent it if we please; still, like unsettled questions which have no respect for the repose of nations, it will not down if true.

A leading American practitioner writes me, "We are fast becoming a mere tender to a trade association, and about all the liberty there is left us is the right to buy goods."

Is dentistry, then, in a different position from that of other professions that claim to be liberal? There are, of course, those who have taken the degree of Doctor of Medicine as covering the whole, and

\* Extract from an address delivered before the New York Odontological Society, March 19, 1889, at New York Academy of Medicine.

who do not care for a partial degree in medicine or surgery ; others find that the recognition of the dental degree by the American Medical Association is all that is needed ; but these leave the point untouched. Has the dental profession of to-day the morals and atmosphere that entitle her to be called a liberal, free, learned, or scientific profession, and to rank with divinity, law, and medicine ?

It will not do to trust to medical degrees to entitle dentistry to this position, for they may be obtained for use as a pass-word or for patronage or influence ; and a medical degree, or education, or membership in the American Medical Association, intended strictly for publication and not as a guarantee of faithful assumption of the liberal obligations they have always implied, will not avail much for the elevation of the profession.

There are some who quote the irregular practices of off-colour physicians as affording a shield for themselves, and a hope that the American Medical Association will not look too closely into dental exclusiveness. To be of real value to dentistry, the recognition of it must call on us to leave quack ways and methods behind. We are not ambitious to rank with off-colour physicians, or to make by reason of patents and secrets an off-colour section in the association. We do not want it to shut its eyes to violations of the code to admit us, and thus step backward. Let them provide that all papers, clinics, and exhibitions given be up to the standard of the other sections, or else their recognition of dentistry will be a curse and not a blessing.

For years we were under the rule of a Rubber Company, the last part of the time through the purchase of a patent from a dentist. The present Tooth Crown Company will hold the profession, if successful, by virtue of aid given by dentists, by the men who formed it being received at clinics and introduced without the improvements or operations being given fully to the profession. In fact, to use a homely illustration, they were "given with a string tied to them so that they could be pulled back—and the profession pulled in."

The student in dentistry is taught with patent instruments, uses daily filling-materials whose formulas the instructors do not know ; and, after passing examinations and fulfilling the legal requirements of the State, must, if he wishes to practice all that is published in his text-book regarding operations, pay, or buy a license from others, or expect litigation. He will find the instruments of his profession so handicapped with patents that all makers are not at liberty to serve him. They can withhold, or decline to make, and refuse to permit others to do so. This power has been given them by his brothers, who have sold to them the "exclusive right to make, vend, or use." They can direct him to cease improving an instrument, because they have bought from a brother the patent which covers it, and have thus secured this power. Even a better instrument cannot be introduced when this power has been sold to those outside of the profession. If he is studying any question which involves instruments or processes, he may find himself obliged to ask the permission of his brothers to work at the problem, or else I mistake in my reading of the foot-note to an article by Dr. Bogue in the *Dental Cosmos* of March, 1885, where we are informed that "Dr. Jarvis was the first to separate teeth by means of a screw, that Dr. Perry had improved on this instrument, and that, with the *permission* of both these gentlemen, Dr. Bogue had

been working on the problem for several years." These are three well-known names in the profession; one has *had permission* to work on the problem of separating teeth. He may find, after becoming a member of societies and listening to papers read at the meetings, or when he reads his own journals, that papers seem to be written to help the sale of appliances that destroy his independence, that men clinic to advertise instruments, or that clinics are used to introduce quacks or quack methods. That if he ask information at a meeting or clinic regarding a compound he may be refused by the person presenting it; find, after witnessing an operation, that he must take out a license before introducing it in his practice. This license may involve conditions, and be taken from him at any time for non-fulfillment of them.

It is possible for a Sixth or Eighth avenue dentist to purchase the entire right for New York City, and those who practice between Sixth and Madison avenues become dependent on him for permission to study or use. He may demand the right to inspect books at any time, have them brought to him, or prescribe in what form they shall be kept, have the lists of patients for whom the operations are performed sent to him as often as need be, and rightfully refer to any he controls as "a man who works for me." It often calls for as much expense in time and thought to prepare a paper or perfect the details of an operation as to invent an instrument. The dentist who is obliged to pay his brother for the right to use instruments, may not be able to invent another, and so "get even." He may, however, be able to devise a new way of filling, or process of construction, and as he cannot dispose of this like an instrument, he must sell to a company who will "work it on the license or royalty plan." For, bear in mind that up to this time we have not been willing to face the question of the falsehood of patents in a liberal profession, but have admitted their place in dentistry, and have only fought to test the legality of those where license or royalty has been asked. We strain at the gnat of the Tooth Crown Company, but swallow without trouble the camel of illiberal patents and secret materials. We should be teachers, not traders, and condemn alike all the men who sell the profession into the hands of trade. At the present time some are selling the control of instruments to makers, others processes and operations to companies who wish to license; thus providing an upper and a nether millstone between which the great body of the profession can be ground exceeding small.

Many patent defenders say that a man should get his pay for time and labour. With this simple statement there can be no quarrel. The professional view is this: that in getting his pay, he is under moral obligation not to injure his profession, nor by reason of his invention give power over the profession or any fellow-member to any one. That if by reason of it he has aided oppression of makers of limited means, or has subjected them to litigation, he makes himself and the profession a party to illiberal motives and tendencies. In a liberal profession mutual help, exchange of thought, whether embodied in instruments, essays, or consultations, should be a sufficient compensation, and it is so held in the medical profession.

I read with shame and professional humiliation of a teacher who makes an appliance of a secret material, patented, so that no one else can make it, sold through a "sole agent" to combination dealers only.



**Exclusive in conception, exclusive in execution, exclusive in manner of distribution. When this is the teacher, what will be the student ?**

We may, in our poverty, envy Cummings, who sold us for money to the Dental Vulcanite Company, and say we would do the same if we had the chance, and that Dr. Barnum was a fool not to do so ; speak of the advantage that rubber plates have been to thousands. But when we talk of ethics we should know that we were not free men or a free profession during those years of disgraceful bondage ; the atmosphere was a trade atmosphere, and the men developed in it not professional men, and it has left a stain of trade on our profession that may never be effaced.

I went through the Children's Hospital, in Boston, and after passing through the wards asked to be shown the workshop where their instruments and apparatus are made. I said to the surgeon who attended me, "It is as important that you should have those men under your control to make as you direct, as to control the nurses. Allow them to patent those instruments, or patent each improvement that helps you overcome some new difficulty, and sell the control to them, and it would be but a few years before they were exercising more authority over the instruments used in the hospital than you." Then I told him the whole story of the shameful, illiberal condition of dental practice : that instruments ordered could not be delivered on account of the quarrels and litigation among makers ; that honourable practitioners had been forced by threats of litigation to take out licenses to perform operations and pay a commission on the amount received—were obliged to allow the company liberty to examine their books ; that I had heard that upwards of a hundred orders for one instrument could not be filled, because dentists had sold to makers the power to control instruments their fellow-members needed ; that valuable instruments could not be introduced because patents were thought to cover them, and, by having purchased those, makers could threaten with litigation any one who proposed to make them ; that certain instruments were held for lease and not sold, that a license and percentage were to be charged for their use, and that this license could be revoked at any time for non-payment. He exclaimed in astonishment, "Are dentists in such a hole as that ?"

The commercial value of a patent is often in the power it gives, not in the time spent on it, or its ingenuity, nor its value to the profession ; and a maker, seeking to control a market or an instrument, will not look except to the valuable vantage point that he can secure by purchasing it. If one by buying a patent on an instrument can prevent competitors coming into the field, that will be the value of the patent to him. A patent, of little or no value on its merits, may thus be the key to a legal situation, and others may be ruined by a bought patent. It is interesting to notice that the same class of minds that justify patents in dentistry also justify secret preparations and the refusal to teach improvement or give information, and the formula of materials or medicine and their true or scientific nomenclature. Thus patents are only part of their offending against the standard set for a liberal profession, and thus the real object—exclusiveness—becomes apparent. Others seek to turn the question from patent right to copyright, though I have not heard them mention the book whose owners have formed a company and worked it on the "license or royalty plan." When copyright is used like patent right, so that the consent of the

author or owner must be asked before operations can be performed, and companies are formed to license, permit, or appoint those who shall have the right to act for them in certain territory, it will be the duty of those who guard education and the liberal profession to include that also, among those things that debar from memberships or association.

A defender of patents in dentistry, in writing to a medical journal, makes this humiliating confession regarding the subserviency to trade to which they have reduced dental societies:—"Our dental inventions are not," he writes, "shut up like those of our medical *confrères* in one city or in one society, but are shown in practical use at all the clinics of the State societies, either by the inventor in person or a practitioner *appointed by the dental firm* who holds the right of manufacturing."

Are the appointments of the surgeons who operate in the hospitals of your city made by firms who own and manufacture instruments? Is this right of manufacturing ever sold without *the power to threaten* or to *sue* other dentists who may be improving instruments that may infringe or compete with it? One would suppose that pecuniary interest would be enough to debar from a meeting or clinic those things in which practitioners had a financial interest. For in a meeting a member is at once judge and jury and witness; and Garretson says, in writing on expert testimony, "that the scientific man who appears in the witness box as an advocate cuckolds science." And are our societies, schools, and journals less in importance? Mr. Justice Gray, of the United States Supreme Court, left the bench and did not take part in hearing "The Telephone Case" merely because a relative was a stockholder; and no lawyer can be asked to try a case before a judge or jury who would be financially interested in the result of the verdict.

In clinics all should be given as part of a scientific and professional demonstration, not as a sign-board to point the way to the shop of some exclusive maker. Clinics are best defined as "*bedside teaching*," but our neglect of professional obligations has reduced them to *bedside peddling*. I doubt if there is a dental society holding clinics to-day that is not introducing illiberal practices. The odious Tooth Crown Company gained its first introduction through them.

The dignity of the professional teacher requires that clinics shall not be used as advertising boards for patent instruments or materials, but that all operations taught in them should be performed with free instruments, and should be as free to be followed as any operations in the hospitals of your city by the surgeons witnessing them. Better give them up than to have them used by Tooth Crown Companies, or the like, or conducted in a trade atmosphere which poisons professional life-blood, so that it will not form a healthy professional growth. On nearly every society programme I see the names of teachers in our colleges, who, by reason of their patents on the instruments to be used in the clinics, make it not unfair in us to suppose they derive a pecuniary benefit thereby; and I, Mr. President, who am a simple man, and perhaps foolish enough to think that men who desire to be classed as belonging to a liberal profession should strive to show the outward or visible signs or forms of one as evidence that they are possessed, also, of its inward or spiritual grace, have been sadly troubled whether to class these gentlemen

as "college teachers" acting as *dépôt-steerers*, or "*dépôt-steerers*" acting as college teachers.

With the combination of instrument-makers and others, called by those who compose it the "Dental Trade Association," we are concerned, as it affects our profession. It is not something we are at liberty to discuss if we wish; but if its effects are such as to keep dental requirements from the usual channels of medical and other scientific supplies, or to hinder competent persons engaging in our service, it becomes a question that it is our duty to discuss, and one which we have no right to omit.

"Sell me this patent; we shall never dictate to dentists," says the Tooth Crown Company or instrument-maker. The professional man must answer, "I cannot sell you *the power to do it* even if you do not propose to." For patent does not imply use, but *power* over so much of dentistry as the invention covers, and makers often demand complete control as a condition of making; and once made property by patent, death, sale, financial embarrassment, litigation, all become agents that may remove it from the profession and give its title to others. The fact that they are property is just the worst part of it, and constitutes the danger to a liberal profession. Dr. Hale, in the address quoted at the beginning of this paper said:—"The medical profession brands with infamy the man who makes God's Truth his property." We do not want our calling to depend upon the views of others regarding their property, be they the Tooth Crown Company or combination instrument-makers. For not more surely does the wire that runs to our office bring with it the subtle power of electricity, than do patents and secrets subject our profession to all the vicissitudes of a trade.

### Relative Safety of Anæsthetics.

*To The Editors of THE LANCET.*

SIRS,—The publication of the report of the Second Hyderabad Chloroform Commission and Dr. Lauder Brunton's explanatory remarks given to the Medical Society afford very many points for careful study. It is unnecessary for me to dwell upon the debt we owe to Surgeon-Major Lawrie, to the public-spirited Nizam of Hyderabad, or to Dr. Brunton and the other members of the Commission. Dr. Brunton's work has always been so good, so thorough, and so earnest that I believe all who are interested in this most important question—Can chloroform be given safely, if given properly?—looked forward with the utmost interest to the feast of reason which he, alike with the other members of the Commission, was to place before us. Now that we have got it, are we happy? Dispassionate candour compels me to reply that I at least have been carried no farther, although, setting main issues aside, I would add no one can read the suggestive report without gleaning much that is valuable and much that is instructive. Of the many points involved I can crave your indulgence for reference only to a few. In the first place, I find no attempt is made to bridge over the great hiatus betwixt experiment upon the lower animals and the daily experiments made on man. Possibly this is to come. Again, I am disappointed to learn no authoritative state-

ment as to whether dogs, monkeys, &c., are liable to syncope under any conditions ; personally, I believe if they are so the occurrence must be most rare. Comparing the statements concerning the lower animals with one's own experience among human beings, a wide discrepancy occurs ; for every grade of heart weakness finds a record in the notebook of every observant anæsthetist, provided his hospital experience is large ; nor can the bulk of such cases be attributed either to primary failure of respiration or careless administration. No doubt maladministration may account for some deaths under chloroform, but not all, since such fatalities have occurred under the skilled hands of men whose knowledge and experience were great and whose reputation was at stake. Again, we have long acknowledged the danger of death from asphyxia occurring during chloroformisation, and Snow pointed out long ago how over-dosage would, by paralysing the medullary centres, bring about death ; but our experience—and it must be conceded that a daily round of experiment and observation made upon human beings and conducted through many years gives practical anæsthetists a right to a moderately authoritative judgment in the matter—repeated again and again, tells us that in a certain number of persons the pulse flags, loses tension, and fails, even though respiration remains unimpaired until with cardiac failure respiratory rhythm ceases. That deaths occur in the initial stage of chloroform inhalation is commonly reported ; but if it be contended that such arise from fear, as in the oft-quoted case of Simpson, confusion becomes worse confounded, for patients exposed to the same terrors from nitrous oxide gas, which has been administered many millions of times, and from ether, do not die in the same way ; so that we are forced to believe chloroform, however it does it, does kill in a way peculiar to itself, which no forethought can anticipate and no care or skill can obviate. Again, we must remember that temperature has much to say to shock and heart failure, and it may not be irrelevant to suggest that the Tropics in this way may contrast favourably with temperate zones. Dealing with the comparative safety of chloroform and ether, I think we may be pardoned if we decline to accept as proven the conclusions arrived at by the Hyderabad Commission. In the first place Dr. Brunton told us that his ether was impure ; secondly that in the climate of India it is impossible to obtain anæsthesia by ether and maintain it, unless air be so rigidly excluded that suffocation occurs. Under such circumstances, ether is no doubt a deadly anæsthetic. In temperate countries ether is not given in this way, and no asphyxial phenomena are present. To describe ether narcosis as semi-anæsthesia is to prove that the modern methods of giving ether are unknown to the writers, and to invalidate their strictures upon that safe and most valuable anæsthetic. In conclusion, I would add that the experiment undertaken by the Commission to elucidate shock under anæsthesia is again totally opposed to our clinical experience. Were the conclusions advanced to be accepted by us, we should find it hard to explain the fluctuations in the pulse, the differences in respiratory rhythm which occur in laparotomies when the intestines are handled, the pedicle of an ovarian cyst is dragged upon, or a bladder is seized and held while punctured in suprapubic cystotomy. The division into "chloroformists" and "etherists" is irrational and harmful ; every anæsthetist learns sooner or later that every case is *sui generis* and a law to itself,

and for each must he decide between, not only chloroform and ether, but between them and the many other methods of mixed narcosis with which we are now familiar. Without fear or dread must he be prepared to give one or the other anæsthetic, but he must be keenly alive to *all* the possible contingencies of each, and not live in a fool's paradise that if he only obeys certain rules and directions he and his patient are safe and he may administer his anæsthetic "with perfect ease and absolute safety so as to do good without the risk of evil."

I am, Sirs, yours faithfully,

DUDLEY W. BUXTON,

*Anæsthetist to University College Hospital.*

*Mortimer Street, W., Feb., 1890.—Lancet.*

### Foreign Body in Œsophagus—Œsophagotomy— Recovery.

UNDER THE CARE OF LACHLAN M'FARLANE, M.D., IN  
TORONTO GENERAL HOSPITAL.

F. L., æt. twenty-three, moulder.

The history of the case is as follows :—On November 30th, at nine o'clock in the morning, while at work, he somewhat hurriedly took a drink of water. While swallowing the water a plate with an artificial tooth attached became dislodged from the roof of his mouth; the first intimation he had of the dislodgement of the plate was that immediately after swallowing the water he felt something sticking in his throat, and at the same time observed that the plate was no longer in the roof of his mouth. He went immediately to a doctor, who, with the assistance of another practitioner, passed an umbrella probang, but did not succeed in doing any good. Dr. McDonagh then saw the patient; he examined with the laryngoscope, but failed to discover anything abnormal; a probang with a bulbous extremity was then passed into the stomach, and during withdrawal a foreign body was detected at a certain point; a grating sensation was felt. Located by measurement, it was eight and a quarter inches from the upper incisor teeth, or two inches from the upper limit of the œsophagus.

Œsophageal forceps of various kinds were introduced into the gullet; during one of these attempts the foreign body was seized, but the patient grasped the doctor's hand and forced him to relinquish his hold; all subsequent efforts to seize the body with forceps were unsuccessful. The operation of œsophagotomy was undertaken fifty-three hours after the patient had swallowed the plate. The wound made was explored with the finger, and at the lower angle a foreign body was detected lying in the gullet; this was distinctly felt and was apparently fixed in position. A scalpel was introduced and an incision made into the œsophagus, cutting down upon the foreign body, and by this means an opening was made a little more than an inch in length; the tooth was then felt projecting into the lower angle of the wound; this was seized and some traction made upon it, but the plate was not dislodged; the plate was then grasped by its superior margin and rotated on its antero-posterior axis, so that little by little it was rolled out from its position.

On December 28th patient was discharged from the hospital. He had no inconvenience whatever in swallowing his food, and the wound in the neck was almost completely cicatrized.

For notes of this case we are indebted to H. A. Turner, resident surgeon at the hospital.

*Remarks* :—Œsophagotomy was undoubtedly called for as the only means of obtaining relief for the patient. There was no difficulty encountered during the operation. There were no important structures divided, and the bleeding, which was insignificant, was easily controlled. It was not thought advisable to suture the opening in the œsophagus. The plate had been fifty-three hours in the gullet and was firmly impacted, so that probably some extent of damage had been done to the œsophageal wall, and it was consequently thought safer to leave it open.

During the subsequent history of the case, the most noteworthy point is the way in which the act of swallowing could never be completed without forcing out the contents of the gullet into the wound. It was attempted at one time to pass a stomach-tube and so to feed the patient; but he resented the attempt so strongly that the thing was abandoned as impossible. For a time he was allowed soft food by the mouth, the enemata being stopped, but invariably some of it came through the wound. On the fifteenth day after the operation the nutritive enemata were resumed and for three days he had absolutely nothing by the mouth. The wound gave no further trouble, and a complete cure resulted.—*The Canadian Practitioner*.

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## MICROSCOPICAL AND LABORATORY GOSSIP.

MR. CHARTERS WHITE, of Belgrave Road, has kindly furnished us with the following replies to a querist of last month :—

The greatest obstacle to the successful injection of a small animal is the *rigor mortis* that sets in soon after its death : it is therefore necessary to make all preliminary arrangements complete before killing the subject. What these arrangements are to be, necessarily depends on the process of injection to be adopted. As it is not my intention to dilate on the more difficult injecting of coloured gelatine, but to give as complete a description of the transparent blue injection because the simpler process, I shall content myself by recommending those who wish for the gelatine process to read up such books as "Frey on the Microscope," translated by Cutter; or Schäfer's "Practical Histology," where the subject is treated very fully, and clearly described. As, however, that process with which we are familiar and practically acquainted, and are in the habit of employing is likely to be the most plainly laid before our readers, I shall confine myself to that, in the hope of introducing an im-

portant aid to the knowledge of the distribution of the minute vessels of the different organs of the animal frame. The subject appears to me to be capable of division into two heads—*ante mortem* and *post mortem*, and in my opinion the *ante mortem* division is the most important, because upon the completeness of these arrangements depends more or less the success of the *post mortem* process. It is not likely to lead to this success if we first kill our subject, and then look about to get our various apparatus ready, for by the time we had made our preparations *rigor mortis* would have set in, and the rigidity of the vessels would preclude that even flow of the injecting fluid upon which the success of the operation depended.

The first and most important preparation is that of the transparent blue injecting fluid, recommended by Dr. L. S. Beale in his *How to work with the Microscope*, and which, in the interest of those who are not so fortunate as to possess the book, I must ask to be allowed to introduce—composition of the Prussian blue fluid for making transparent injections—glycerine, 2 ounces ; wood naphtha or pyroacetic spirit,  $1\frac{1}{2}$  drachms ; spirits of wine, 1 ounce ; ferrocyanide of potassium, 12 grains ; tincture of sesquichloride of iron, 1 drachm ; water, 3 ounces—make a sufficient quantity according to size of subject. The ferrocyanide of potassium is to be dissolved in 1 ounce of the glycerine (I find it better to dissolve these 12 grains in the smallest quantity of water first, then add to the glycerine) and the tincture of iron added to the other ounce of glycerine. These solutions should be mixed together very gradually, and well shaken in a bottle. *The iron being added to the solution of the ferrocyanide of potassium*, and not the reverse. If these directions are precisely followed out a dark blue mixture will be produced free from precipitate and flocculi—next the naphtha is to be mixed with the spirit, and the water added very gradually, the mixture being constantly shaken in a large, stoppered bottle. I find it an improvement to add a few drops of hydrochloric acid to this mixture, because if it is desired to stain any sections from the injected tissues at a subsequent period with carmine stain, the blue injection in the capillaries retains its colour. The operator should provide himself with two Woolf's bottles, one to hold the blue injection, and the other, warm salt solution. These bottles are placed on a shelf about 5 feet above the laboratory table—bent glass tubes are inserted through a cork in one of the open necks of each of the bottles, and passing down nearly to the bottom of

them, act as syphons. Two lengths of india rubber tubing slipped over the short ends of these tubes, and of sufficient length to more than reach the table, should be well washed out to free them from the many particles which will be found in all new tubing. In the free end of each length of this tubing is fastened such a stop cock as is generally supplied with injecting syringes. The tubes may then be sucked with the mouth till the fluid in the bottles begins to flow down the tube. When it runs out the stop cock may be turned off. This is done to prevent any air getting into the vessels in the subsequent operations, as that contingency must ever be guarded against as fraught with danger to the success of the operation. We have now two tubes filled with fluid constituting a column, whose weight is sufficient to overcome the resistance of the coats of the vessels. Before proceeding any further, sundry accessories should be ready at hand. A nozzle supplied with the injecting syringe should be selected rather less in diameter than that of the *aorta* of the animal to be operated on. These nozzles have projecting spurs, the use of which we shall see presently. A ligature needle should be constructed as follows:—flatten out the end of a piece of stout copper wire, and having drilled a hole in it to form the eye of the needle, polish the end very smooth, and fasten the other end into a wooden handle. Have ready some fine twine or stout thread. We may now proceed to chloroform the kitten by putting it into any convenient receptacle; when dead, remove the *entire front of the thorax*—it is generally recommended to make a longitudinal incision through the sternum to get at the heart, but this does not leave room for the most important part of the proceeding, and the worst that can happen in the way I recommend, is the escape of a little of the injecting fluid from the cut intercostal vessels. Having got a clear view of the heart, pass the ligature needle, armed with the ligature under the *aorta*, withdraw the needle and leave the ligature behind—now fill the nozzle with the salt solution, and open the stop cock when it is attached to the nozzle, taking every precaution to exclude air in doing so, and having cut off the apex of the heart, pass the nozzle through the left ventricle into the *aorta*, and tie the ligature judiciously tight, taking care not to cut through the coats of the vessel, and fasten the ends of the ligature round the spurs of the nozzle, this prevents it drawing out. Turning the stop cock on, the salt solution will now run by gravitation through the arterial system, and when it comes from the right side of the heart, free from colour,



the stop cock may be turned off, and with the same precautions, as to the exclusion of air, the stop cock of the blue injection may be transferred to the nozzle, and in the same manner as the salt solution the blue fluid will soon be seen tinging all the lighter organs of the body, when it may be left till the amount of injecting fluid is nearly exhausted. By this method the risk of rupture is obviated, a risk which is very great when the ordinary injecting syringe is obliged to be frequently removed to be re-charged—and a more even pressure is maintained than can possibly be given by a fatigued hand—if the plan here advocated is adopted with scrupulous attention to the plain and simple directions here given, I believe an invariable success will be ensured.

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### Microscopic Objectives.

At the meeting of the Royal Microscopical Society last week, it was announced that Dr. E. Abbe, of Jena, had presented to the Society one of the new apochromatic one-tenth microscope objectives recently produced at Zeiss's optical works, Jena, under Dr. Abbe's superintendence. The speciality of the new objective is that the aperture is the highest hitherto attained, being designated of 1.6 N.A., whereas the highest point previously reached by Dr. Zeiss was 1.4 N.A., so that the clear gain of aperture is 20 per cent. The advantage following upon this increase of aperture has been remarkably shown by the perfection of the images obtained in photomicrographs produced by the new objective in the hands of Dr. Henri Van Hewick, Director of the Jardin Botanique, Antwerp, specimens of whose work were exhibited at the meeting. It was further announced that Dr. Dallinger, F.R.S., the well-known microscopist, had consented to join a committee appointed by the Council of the Royal Microscopical Society to make a special report on the new objective to the Society. It is understood that the new construction embodies the use of fluorite in place of crown glass in one or more lenses of the combination, by which a higher degree of achromatism is attained than that of ordinary achromatic objectives. The new objectives are hence designated "apochromatic," and their employment in photomicrography has demonstrated their great practical superiority over objectives of ordinary "achromatic" construction.—*British Medical Journal*.

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We append the following from the *Chemist and Druggist*:—

#### EIKONOGEN.

Formulae for eikonogen developers are "as thick as autumn leaves in Vallambrosa"; never a photographic journal appears but several new formulae are recommended. The best we have yet come across is that suggested by M. Leon Warneke, one of the pioneers of photographic discovery:—

	Parts.
Sodium sulphite . . . . .	40
Boiling distilled water . . . . .	100
Eikonogen . . . . .	10
Caustic potash . . . . .	10

Dissolve in the above order. It should be filtered and bottled away whilst hot, and, for use, diluted with two or three parts of water for strong contrasts, but for softer negatives with seven to eight parts of water. In this formula, however, it must be noted that the salts will not all dissolve, there being too little water; we have found making the bulk to 200 parts better. It might be as well to suggest to chemists to caution their customers who are dabbling with caustic potash or soda, to be careful about handling these in the solid state. An amateur friend has had one of his fingers so severely cauterised by a small piece of soda finding its way unnoticed under the nail of his little finger, as to necessitate the entire removal of the nail and surrounding flesh.

#### A NEW PRINTING-OUT PROCESS.

Dr. W. J. Nichol, D.Sc., has patented a new iron and silver printing process, which promises to be of some value, no hypo being used to fix the prints. It is called the "Kalotype" process, and paper is coated with:—

	Per cent.
Ferric oxalate . . . . .	5
„ tartrate . . . . .	5

On exposure the ferric salt is reduced to ferrous, and is developed by floating, as in the platinotype process, on

	Per cent.
Potassic oxalate . . . . .	10
Nitrate of silver . . . . .	1½ to 2
Ammonia, q s. to clear	

It is, when fully developed, washed in three baths of

Ammonia . . . . .	1 oz.
Citrate of soda . . . . .	$\frac{1}{4}$ „
Water . . . . .	1 gallon

We have been also favoured with specimens of another printing-out process, which at present is a secret, but from a sample of the paper tried personally we can promise a grand future for it, as it possesses some advantages which would be invaluable in everyday practice. We may add that the process has been discovered by an ex-knight of the pestle and mortar, who threw up the pestle, after a year's trial of life as a chemist's apprentice, in disgust, but who has still some faint glimmerings of the smattering of chemistry learnt during that time.

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THE sections showing interglobular spaces about which Mr. Caush enquired in your February issue, were prepared by grinding and staining in chloride of gold. When thin enough they are well washed and placed in a '5 per cent. solution of the chloride for half or three quarters of an hour, then washed and exposed to daylight in a tube of distilled water for four or five days. At the end of this time they will be found to have turned a delicate violet colour owing to the reduction of the gold, and the interglobular spaces will appear dark purple under the microscope, contrasting well with the lighter dentine. When being stained the sections should be in a dark place, and they must not be placed in or removed from the solution with metal instruments. They should be mounted in bensole balsam. Generally speaking, specimens stained with chloride of gold should be mounted in glycerine-jelly, as in this medium the colour remains brighter and the sections look better than in balsam, but the jelly seems to invariably contract for some time after mounting, and the cover glass, being supported in the centre by the hard section and depressed at the edges with the contraction of the jelly, cracks across and admits air. I have now several slides in my cabinet with the covers cracked in this way, and some of them have been mounted again and again for the same reason. There is, however, no risk of this when sections have been prepared by decalcifying and cutting. A more convenient and quicker way of reducing the gold in sections which have been decalcified is to place them in the dark for about twelve hours in a mixture of one part of formic acid and three parts of water. They will then be

found well stained, and after several washings with distilled water may be mounted at once in glycerine-jelly.

Another method of showing interglobular spaces is to stain the sections in logwood, then wash first in dilute acetic acid, and afterwards in distilled water, and place them for a few minutes in a 1 per cent. solution of osmic acid. The acetic acid removes most of the stain from the section, leaving, however, the greater part of that which has been absorbed by the soft matter in the interglobular spaces. This is precipitated by the osmic acid in the form of a very fine black powder, which outlines the spaces well and makes them very conspicuous. The section may then, if thought desirable, be stained in a contrast dye and mounted in balsam. This method of staining is described by Dr. G. V. Black in his book on the periosteum, and termed by him "Pigmentation."

I see a correspondent in your last issue enquires about boiling sections or teeth in wax to show the interglobular spaces. I have never tried either way, and would suggest that he experiments in that direction and reports results. He will find directions for injecting in a useful little book, "Methods of Microscopical Research," by Arthur C. Cole (Baillière, Tindall & Cox). The price, I think, is about half-a-crown.

GEO. G. CAMPION.

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WE have received the following queries from correspondents:—

How can I best prepare sections to show odontoblast in position?

How can I cut and mount teeth of fishes in position?

How are the fine lines drawn on the rings of cement when finishing off slides, and what is the best cement to use?

What is the best stain for objects to be photographed?

Is it necessary to cut a section of enamel to show enamel prisms? and what is the best method of preparing the media and mounting same?

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MR. J. ANDREW, of Belfast, sends us the following:—

*Solutions and Methods for Decalcifying Teeth.*—First place freshly-extracted teeth in  $\frac{1}{4}$  per cent. solution chromic acid for about four days, then in  $\frac{1}{2}$  per cent. for same time, after

which place in 1 per cent. chromic and nitric acid solution, frequently changed till soft enough to cut.

One of best working books is Cole's "Methods of Microscopical Research."

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## ANNOTATIONS.

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IMPORTANT TO DENTAL STUDENTS.—We are requested to state that those about to register as Dental Students should distinctly understand that while the requirements of the preliminary examination are the same for medical and dental students, it does not follow that a person having passed the preliminary examination is necessarily in a position to register in both capacities, for it is essential that professional medical study should have been commenced before anyone can register as a medical student.

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A PAPER has been recently delivered before the New York Odontological Society by Dr. Horatio C. Meriam on the subject of professional morals—a reprint of which has been courteously forwarded to us by the author. The name of Dr. Meriam at the head of a paper is sufficient guarantee that what it contains is worth reading; it is sure to be scholarly, dignified and fearlessly to the point, and the paper in question is no exception to the rule. It is a clear, unaffected and uncompromising *exposé* of the degraded condition of subservience to trade instincts and interests which is the disgrace of a large section of dental practitioners in America, and we have reprinted as much of it as our limited space permitted, in order that some of our own fellow-countrymen might have their eyes opened by the spectacle of an upright and professional American gentleman bewailing the condition of the profession in his own country. Dr. Meriam closes his address by quoting several letters from leading men in America expressing great sympathy with his campaign, and perhaps one—a short one—bearing a very popular signature, may well form the conclusion of the present annotation.

"Feb. 8th, 1889.

"It is for the dental profession to settle its own status. The work is so largely mechanical that it necessarily tempts inventors to seek fortunes through improvements in dental instruments.

The more exactly they exclude owners of money-making contrivances, who patent their inventions, the better will be their claim to be considered a liberal profession.

"Yours very truly,

"OLIVER WENDELL HOLMES."

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At another page we find Mr. R. F. H. King, the president of the Central Counties Branch, speaking of the inborn love of the human race for the mysterious and the miraculous—in fact the "quack." He points out forcibly enough that it is a herculean task to eradicate this birth-sin, by which each human being naturally inclines to "try" treatment in proportion as it is surprising and inexplicable. The process of educating the public mind is no light task, and will only, to our mind, be brought about by the dissemination throughout the country of educated self-respecting practitioners.

We hope to recur to this subject at greater length in a future number.

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THE PROPERTY OF HOSPITALS.—In the House of Lords, on the 20th ult., Lord Sandhurst asked whether Her Majesty's Government would agree to an inquiry by a Select Committee with regard to all hospitals, provident and other public dispensaries, and charitable institutions within the metropolitan area for the care or treatment of the sick poor which possessed real property or invested personal property in the nature of endowment of a permanent or temporary nature. Viscount Cranbrook said that the scope of the proposed inquiry, as it was put upon the paper, was one the Government could assent to; and if the noble lord would move for a committee on the subject, the motion would receive the hearty support of the Government. Lord Sandhurst said that on an early date he would move the appointment of a committee.

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AN HONOUR TO ENGLISH SURGERY.—According to a notice which appears in the *Gazzetta degli Ospitali* for March 23rd, the governing body of the great school of practical medicine and surgery, the "Policlinico Umberto I," now in course of erection at Rome, invites sculptors to compete for the commission to

execute two bas reliefs in Monte Alfilano stone. These bas-reliefs are to adorn the principal elevation of the medical and surgical departments respectively. The subject of the former is to be Morgagni teaching his pupils the investigation of the seats and causes of disease. He must be represented as the founder of the naturalistic method, and not as mere dissector of dead bodies. The subject of the other design is to be Sir Joseph Lister in the act of demonstrating his system of dressing wounds, which the Committee calls "the greatest conquest of modern surgery." The sketches must be presented at the new school of Vittorino da Feltre, Via della Polveriera, at Rome, between 10 a.m. and 6 p.m. on May 15th, 1890. The artists whose sketches are selected will each receive 15,000 lire (£600) in four instalments. The jury will consist of Professor Baccelli as president, and Professors Durante and Bastianelli, with two sculptors, two painters, and two architects. We are sure that we are expressing the feeling of the whole profession in this country in congratulating Sir Joseph Lister on thus receiving while he is still among us an honour ordinarily reserved by mankind for the greatest of its departed benefactors.

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NATIONAL DENTAL HOSPITAL.—The last Smoking Concert of the season took place on Thursday, March 27th, at the Portman Rooms, Baker Street, W., under the genial chairmanship of the Dean of the School. About 160 were present, amongst whom were Drs. Hill and Waller, of St. Mary's, Mr. W. H. Ash, and nearly every member of the staff. The programme, which included nearly every variety of entertainment, was received with hearty applause, particularly the contributions of Messrs. Genet (recitation), A. and H. Kelvey (banjoists), McLean (musical sketch) Pearce (legerdemain), Prager (impersonation), Bluff, Joyner, May and Alfred Smith. The Chairman took the opportunity to announce the generous offer of Messrs. Ash and Sons to award an annual money prize of three guineas to the Students of the College for a paper on Dental Surgery, the competition to take place during the Winter Session.

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A NUMBER of the *Pharmaceutical Record* contains the following statement about Thymol in Mouth-washes :—Comparative examinations of many mouth-washes show that those

containing thymol as the disinfecting agent of the mouth-cavity and teeth are to be preferred to others. The action of thymol is not very rapid, but its use has no deleterious influence on the teeth whatever. Salicylic acid acts on the teeth. Solutions of salicylic acid in contact with teeth for some time are found to contain calcium.

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DENTAL Surgery which up to the present time has been in France entirely unrestricted is likely soon to receive legislative attention in that country. At present it forms the object of one of the sections of the Medical Bill, but the provisions are cumbersome, inadequate, and generally criticised. The feeling seems to be that the matter ought to be decided on its own merits, and not in the way most satisfactory to the promoters of the Medical Bill.

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SALE OF ANTIPYRIN RESTRICTED.—We learn from the *Chemist and Druggist* that in consequence of a man in Austria having tried to poison himself with eight grammes of antipyrin, the sale of that drug to the public has now been prohibited. The curious thing is that the big dose of antipyrin did not do the man a bit of harm.

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AN Institute for the Prophylactic Treatment of Hydrophobia has just been opened in New York.

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OWING to the meeting of the Odontological Society not taking place until the 14th, we are unable to give our usual report this month. It will appear in our next issue.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

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### Nitrous Oxide and Oxygen.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I am surprised that so long a time has intervened since the appearance of Dr. Hewitt's article and Mr. Dent's letter on the above subject, and with your kind permission I shall have pleasure in bearing my testimony, in the hope that others will do the same.

I have administered the mixture in over fifty cases, and can con-



fidently confirm all that Dr. Hewitt said, so far as my experience has gone. My apparatus is like the one Dr. Hewitt used at the Brighton meeting, supplied to me through Messrs. Barth.

I find it best to get the patient into the chair, have all in readiness, then fill the gas holder and at once to administer, thereby ensuring the mixture being fresh. As a rule the breathing is calm and regular, little or no alteration in the pulse, no lividity, and when about half the dose of the gases have been inhaled the extremities are usually relaxed, which is a good sign that the anæsthesia will be perfect by the time the whole of the dose has been taken. Sometimes, however, rigidity is present instead of relaxation, which is a little perplexing at first. Invariably there is some reflex when the conjunctiva is touched, but the anæsthesia produced is very satisfactory.

I am confident that I have been able to do more work for patients under the mixture than under nitrous oxide alone; there is less excitement and the patient is altogether more still. The relaxation which follows is a great advantage when extracting lower teeth at the back part of the mouth, the tongue being easily pressed out of the way to allow the offending tooth to be grasped with the forceps, whereas with nitrous oxide the tongue often becomes so rigid that it is with difficulty the tooth can be taken hold of.

One patient I administered the mixture to on five consecutive days with no unpleasant after-effects whatever.

Twice I have repeated the administration with a very short interval with good results.

One patient who inhaled the gases on two occasions, the first time there was relaxation, while the second there was extreme rigidity.

Another patient who took two doses, was very rigid both times, and while the teeth were being extracted there was a profuse flow of saliva.

In three cases each patient breathed the gases at almost an alarming speed, but quieted down somewhat towards the finish. No pain was felt in any case during the operation.

I have myself had a tooth extracted under its influence absolutely without pain, with no unpleasant after effects; the operator was so well satisfied with the state of the anæsthesia produced that he extracted my tooth when two-thirds of the dose had been inhaled.

It is very much more agreeable for friends or relatives of patients to witness than when nitrous oxide is given.

However, I must not forget to record my failures, which altogether number three, if they can be termed such.

Along with my apparatus the maker sent a stop-cock, by means of which the gas bag can be converted into a supplemental bag. The first day the apparatus arrived the mixture was administered twice, both patients being in the house at the same time wanting gas. The first was most satisfactory, but during the time of disposing of the one patient and getting the second into the surgery, my assistant, being

somewhat interested in looking at the new apparatus during my absence from the operating room, had closed the expiratory valve. When the administration was commenced, as a consequence the patient inhaled her own breath along with the mixture, which resulted in failure. This, however, cannot be blamed on the gases, but through using an apparatus which one had not got quite familiar with.

The second failure was a friend, who inhaled it for the purpose of exhibiting its effects before the members of the Midland Branch while holding a meeting in Halifax last October. He proved very excitable, as had always been the case when nitrous oxide previously had been taken.

The third failed because the nitrous oxide ran off, and the gas holder not being much above half full, there was not enough to procure complete anæsthesia.

I have endeavoured to carefully carry out Dr. Hewitt's instructions, and now I never look for failure. And I feel confident all who have done likewise will join me in thanking Dr. Hewitt for introducing to us an anæsthetic which is such a decided advance upon nitrous oxide.

Yours very truly,

A. B. WOLFENDEN.

*Halifax, April 3rd.*

### The Dental Curriculum.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Without needless preface I will reply to Mr. Smale's letter in last month's Association Journal.

He says, "In connection with the arrangement of lectures it should be noted that the college requires two courses of twelve lectures each in Dental Anatomy, Dental Surgery and Dental Mechanics," and on this statement his subsequent argument rests. But I am informed by the Secretary of the Royal College of Surgeons at Examination Hall that "the regulations do not specify the number of lectures to be given in any course required for the licence in Dental Surgery." This reduces the point at issue to the question, whether a course of twenty-four consecutive lectures in Dental Surgery and in Dental Anatomy, delivered each year at Guy's Hospital, should not be at least equivalent to twelve lectures repeated in two consecutive years. I am indebted to Mr. Smale himself for the information that the courses of lectures delivered at the Dental Hospital of London are twelve in number, and repeated in successive years.

How the delivery of special lectures at 4 p.m. would be likely to interfere at all seriously with hospital practice, which commences at 9 a.m., I fail to discern.

Referring to the course of Demonstrations on Dental Microscopy

given at Guy's Hospital, Mr. Smale thinks that the subject "should be taught in the physiological laboratory where all the appliances are at hand (?) and its teaching provided for under practical physiology." I leave others to judge whether this would be a good thing for medical students, but in the conspicuous absence of such teaching elsewhere the dental schools would do well to supply the deficiency for themselves.

The course of lectures on operative dental surgery recently established at Guy's Hospital is considered by Mr. Smale unnecessary and undesirable, and he prefers the arrangement of each "surgeon" in turn giving a demonstration once a week. Chair-side demonstrations are valuable, and should be given frequently, because so very few students, however closely packed, can see what is going on. But even if every student could profit by a weekly demonstration, there would be ample scope for a course of lectures on operative dental surgery. That subject does not merely embrace the manipulative processes of inserting gold and plastic fillings, but should include the consideration of the scientific principles on which the manipulations are based, and those considerations that guide us in the selection of the operation performed. The systematic discussion of theories involved, and the review of evidence, perhaps conflicting, is more suitable matter for a lecture than a demonstration. The absence of such teaching might tend to reduce the dental surgeon to the same level as the dental mechanic.

But I do not think one need choose between the relative advantage of a weekly demonstration and a course of lectures on operative dental surgery, for at Guy's Hospital we have found means to combine a daily demonstration given by one of the dental surgeons with the course of lectures referred to.

I am, sir, yours faithfully,

F. NEWLAND-PEDLEY, F.R.C.S.

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### Re Southern Counties Branch.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I do not propose to carry on a discussion in your columns with "A Brighton Member of the Association" in reply to his letter in the March journal, but for the information of members who may have seen his letter and were not present at the Southern Counties Branch Meeting on March 29th, I wish to correct his misleading statement that "We were promised informal meetings for the discussion of papers hurried over at the Annual Meeting, but they have not been held." Now, sir, the material left over at our Annual Meeting consisted of a paper by Mr. Reinhardt which was read at the Brighton Meeting of the Association in August, an adjourned discus-

sion on Mr. Harrison's paper on Dental Education, and a short casual communication by Mr. Henry. In spite of urgent appeals to members to come forward with papers, &c., we were left, as the time for our usual autumn meeting approached, with absolutely no fresh material to interest members if called together. Considering the changes that had taken place in the dental curriculum since Mr. Harrison's paper was written and were still in progress, the time was considered inopportune for continuing the discussion of his paper. Mr. Harrison has, however, promised to re-open the subject at our Annual Meeting at Kingston in June next, when it is hoped we may again have the advantage of hearing the views of men connected with the various dental schools.

With regard to the "promise to hold informal meetings," I presume he refers to the wish expressed by the Council to hold (if possible) a special meeting in any town from which an invitation to do so should proceed. No such invitation has been received.

The executive taking the above facts into consideration, in conjunction with the circumstance of the Annual Meeting of the Association having been held at Brighton in August, which necessitated the devotion of an immense amount of time and energy on the part of many of our members, felt that interest in dental matters by the Branch was for a time somewhat exhausted, and reluctantly came to the conclusion that it would be wise to forego a meeting which was likely to be a failure.

With regard to the question of appointing sub-secretaries for towns or small districts, I may state that a similar project was considered by the Council a year ago, and was then rejected as an innovation of no practical utility. There are now, however, fresh schemes for increasing the usefulness of the Branch under their consideration.

In conclusion, will you allow me to say that I think any plan for the better government of a Branch or reflections on its executive should be brought forward openly at a meeting of that Branch where the matter could be discussed at once by the parties interested, and not anonymously in the valuable space of the Association Journal.

Your truly,

MORGAN HUGHES.

4, Wellesley Villas,  
Croydon.

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### Extractions under Hypnotism.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Any means whereby insensibility to pain can be induced, with a minimum of danger to the patient, must be of great moment to medical men generally, and to dental surgeons in particular.

I feel it to be my duty, therefore, to add to the evidence—given by Mr. Arthur Turner in last month's Journal—of the value of hypnotism

in dental operations. For some time I have occasionally extracted teeth when patients have been in the hypnotic state, and in every case without—so far as I could discover—the slightest pain.

Some years since I frequently induced in persons what was then called the "mesmeric state," for the entertainment and instruction of my friends, and the entire immunity from pain when subjected to minor injuries, also the curious antics of these persons at the slightest wish from myself, converted many sceptics. But finding in one or two cases that those operated upon were for some time afterwards entirely under my control, I deemed it a very dangerous power and discontinued the practice. And although I have frequently since then extracted teeth for persons in the hypnotic state, I have not induced that condition myself, and now think it would be very unwise for a dentist to do so.

In my opinion there are many objections to the *general* use of hypnotism. Amongst them, first, comparatively few possess the power, and these only over a limited number of individuals. Second, in first cases some considerable time is necessary, as a rule, to induce the condition. Third, it is doubtful whether persons having once submitted to be hypnotised retain their freedom of will, as Dr. Bramwell tells us. My experience certainly points in the opposite direction. The matter is worthy of discussion in your pages, but that hypnotism will be generally resorted to is, I think, very doubtful. Those patients to whom we would rather not give gas may be the most suitable, and therein possibly lies its usefulness.

Before operating, it will be as well to test the condition of the parts by a sharp prick or two with a suitable instrument, otherwise the dentist may be unpleasantly surprised, and where a lady is operated upon another should be present. Doubtless others will give us the benefit of their experience.

I am, Sir, your obedient servant,

T. SCOTT FOSTER, L.D.S.Glas.

85, Commercial Road, Portsmouth,

April 3rd, 1890.

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*"Miracles have ceased, and therefore we must need admit the means how things are perfected."*

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Were it not that a direct appeal had been made to me as immediate Past-President of the Odontological Society, I should not have felt inclined to take notice of a new method of attracting attention to his goods which has been recently adopted by a certain manufacturer. It is possibly true—I have no means of verifying the statement—that a President of the Odontological Society and a Fellow of the Royal Society, have purchased a bottle of an advertised compound

said to work miracles ; but I venture to affirm that if they did make such a purchase, it was not because they were imbued with faith in its miracle-working powers. I however beg leave to say that I am not one of those who may have become the fortunate possessors of a sample of the valuable medicament in question ; and I further beg permission to express my opinion (and my hope) that the method of advertising to which I allude will tend to defeat the ends which it is intended to promote, and will in no sense prove a paying procedure.

Yours faithfully,

HENRY SEWILL.

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### The Forthcoming Bazaar at Exeter.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR MR. EDITOR,—You were good enough to insert an appeal in the March number of the British Dental Association Journal, for contributions towards the forthcoming bazaar, in aid of the completion of the scheme of the Albert Memorial Museum in Exeter—the institution which is placed at our disposal for our next annual meeting.

I wish to merely add to your notice that any articles sent to me I shall be very pleased to acknowledge and forward to the committee as coming from Members of our Association. All contributions should reach Exeter by Saturday, June 7th.

With thanks to you for your kind assistance,

Believe me, yours faithfully,

JOHN T. BROWNE-MASON.

6, *Southernhay, Exeter, April 5th, 1890.*

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### APPOINTMENT.

M. ALEXANDER, L.D.S.I., has been elected Honorary Dental Surgeon to the Stanley Hospital, Liverpool.

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NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions to the British Dental Association became due on January 1st and are requested to forward the same to F. CANTON, Hon. Treasurer, 40, Leicester Square, London, W.C.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 5.

MAY 15, 1890.

VOL. XI.

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**The Professional Atmosphere.**

THERE is something in the title of Mr. Meriam's paper noticed in our last issue, which arrests the attention and raises a line of thought separate from, yet intimately connected with, the views expounded by the author. Since the establishment of our Association, and indeed before its existence, we have heard renewed again and again the cry for a "code of ethics." What such a code would do, or what it should be or how it would reduce to order the chaos of ideas which afflicts our profession, does not seem very clear to those who are anxious to frame, or to have framed for them, this ethical spelling-book which is to be a guide when their own individual judgment fails them. Of this we may be pretty certain, that though it might be cited in defence of what is right—quite a superfluous measure in our opinion—it would be far oftener perverted

to cover what is wrong, for does not the devil quote Scripture to his need?

The title of "Professional Atmosphere and Morals" seems to indicate to us that the talented author of the paper recognised the difficulty of materialising or formulating the first portion of his subject. With the moral obligations of professional men towards each other he has no difficulty in dealing, and the trenchant manner in which he specifies the offences against professional usage, and exposes the injury which they entail on the profession at large, show that the galled jade winces under the sting of professional immorality. But to specify the foundation upon which professional morality is built up is quite another matter. What makes that which is legitimate and even laudable in trade disgraceful and immoral in a profession? Is the answer to be found in the ether which the author has called professional atmosphere? We are inclined to think that it is, and that until a man has learned to live and breathe in a professional atmosphere, any so-called code of ethics will be written in vain. But when the mind has become possessed of the professional mode of thought and feeling, the professional cult unconsciously yields to it; then is any professional code quite unnecessary, and we think that a code which could establish such a frame of mind is as yet unwritten, because unwriteable. We must therefore look in vain to the public for any sympathy in our protests against advertising and such like practices. Whatever we may say or do will only be taken as another system of advertising, and in this the public may not be wrong, for while those who cry out against this form of quackery bewail the loss inflicted on the public, they are equally sorrowful over the loss inflicted on the respectable practitioner. Do we not hear the question asked—What is the use of giving our sons an expen-



sive education if the advertiser is to be allowed to do so and so? The aggrieved ones seem to consider education a heavy burden imposed on their offspring, and a tax on their resources which brings no return, as if education had not in itself a value, and as if it would not make the man better able to follow his profession with ease and comfort to himself and with greater advantage to the public. This estimate is the oxygen of the professional atmosphere, which has to be breathed for a long time and under many conditions before the hankering after the "flesh pots" can be cured.

The ingenious and elaborate address of our friend and co-worker, Mr. R. F. H. King, read before the Central Counties Branch, examines with peculiar effect the working of the human mind, and shows how people have been the victims of their own credulity and their own willingness to be deceived from time immemorial. He points out also how chronic sufferers long for relief, and how, when they think that they have exhausted all legitimate processes, they fly to quackery. "They are in extremes," and like the drowning man clutch at a straw, or perhaps something worse. "Something must be done" is the cry of the quack and of his victim, and something is done and so also is somebody as well. Impatience of science and of scientific methods, the results of which are not always apparent, the disappointment of unreasonable expectations, the absence of inflated and mendacious promises discredit the patient, painstaking professional man in the eyes of the sufferer, and so with clouded intellect and perverted mental vision he has "something done."

May we venture to ask if this is not the condition and position of some of the members of our own profession regarding some of the evils from which as a body we suffer? Are they not showing a like impatience of an

inherited disease from which there is but one way of escape? Is the cry of "Something must be done" not heard amongst us and has it not met with a response more sympathetic than wise? Has it not been forgotten that already something has been done? Need we say what?

Has not the change brought about amongst ourselves served to magnify in our eyes the evils by which we were more or less unconsciously surrounded? We look appalled at the pit from which we have been dragged, and we view with horror the condition of those who have refused the helping hand, or have used it only to make themselves, if possible, more objectionable than they were before. We see them more clearly because we see them from another and higher point of view, and so we think them more dreadful and more numerous than they appeared to us when we were all on the same level; but they were nevertheless there all along, although we did not notice them. We may, however, feel sure that the corrective measure which has been applied is working and will work successfully, if we do not, in our very excusable impatience, descend into the same arena with the quack and charlatan, and endeavour to fight them by their own methods. Our alternative method is to maintain that "severe silence" towards such practices which will mark us more and more as professional men.

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## APPOINTMENT.

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CHARLES E. PECKOVER, L.D.S.Eng., has been appointed Honorary Dental Surgeon to the Brighton Blind Asylum, *vice* O. A. Fox resigned.

## ASSOCIATION INTELLIGENCE.

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### Papers for Annual Meeting.

*Regulations for papers intended to be Read at the Annual Meeting to be held at Exeter in August next.*

THAT the full title of a communication intended for the General Meeting be sent to the hon. secretary, if possible, at least six weeks in advance ; that an abstract of every paper offered shall in all cases be in hand a fortnight before the meeting, to be accompanied by the paper itself when proposed to be read in full or in part.

That each abstract and paper shall be submitted to one or more "Special Referees" selected by the Publishing Committee from a body of Literary Referees consisting of ten members or others elected annually at the General Meeting. The publishing Committee to decide upon the report of the referees as to the acceptance of papers, and whether to be read by abstract, in full, or otherwise.

That the reading of a paper shall not exceed thirty minutes, nor of an abstract ten minutes ; and that speakers in debate and authors in reply shall be limited to ten minutes each, except by the express wish of the meeting.

That when the number of papers before the meeting is greater than in the opinion of the majority can in sequence be duly considered, the presiding officer shall resolve the meeting for a specified time into two or more sections, before which the business can proceed simultaneously ; such sections, however, to have no powers or functions not specially delegated to them.

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### West of Scotland Branch.

THE concluding ordinary meeting of the session was held on Thursday, March 27th, in the library of the Faculty of Physicians and Surgeons, Glasgow, Mr. JAMES R. BROWNLIE, L.D.S.Eng., in the Chair.

After the formal business had been concluded, the Chairman called for any remarks on Mr. Oswald Fergus' paper on "The Care of the First Permanent Molar."

Mr. WILLIAM WALLACE said :—In the treatment of the first permanent molar Mr. Fergus recommends the conservation of this tooth oftener than is at present generally done. Some practitioners advise the contrary mode of procedure, thinking that they ultimately gain by the premature loss of the tooth.

In a mouth with the full number of well-developed teeth, the first permanent molars are the largest teeth in the series, and are placed where the force exercised by the muscles of the jaws is focussed ; so

that they both afford a greater grinding surface and are subjected to a greater strain than any other teeth. As often happens, that which ought to be, is not ; for it will be seen, on examining a great number of mouths, that this ideal state is scarcely ever realised—so great are the forces and so varied are the conditions that militate against the existence of this tooth. And many practitioners have become the voluntary allies of these antagonistic powers.

We are thus confronted with a tooth destined by nature to be of the greatest use, and also the tooth whose existence is the most uncertain. If it is our function to save and restore teeth, then this one, more than any other, deserves and demands the application of our resources.

Generally speaking, then, we should try to save the first permanent molar, and when we come to discuss the particular phases in which the tooth presents itself, we shall find ourselves arriving at a similar conclusion.

Between the ages of six and twelve, and after shedding the deciduous teeth, this is the only molar in the mouth, and there is no period in life when the proper comminution of food is more urgent. Mind and body are rapidly assuming the cast and character of the grown-up individual. This is also the period in which general education is given. The education code of this country enacts that a child shall be at school from five to fourteen, which is just a little over the time when this is the only functional molar. Indeed, if mind and body are necessarily related to one another, the preservation of the molar should have something to do with the emancipation of the former as well as the growth of the latter. If laughter is death-like without the incisors, it is just possible that the buoyancy of the soul may be endangered by the loss of the molars hidden behind, and especially by the loss of the six-year old molar.

It is often said that the first permanent molar is not so well calcified as the other teeth—a statement usually accompanied with insufficient proof. This tooth is formed when calcification is at its height throughout the body ; whereas the succeeding molars are formed when calcification is on the wane, so that the third molar is scarcely ever comparable with the first in constitution. When the first and second molars are in place, the relative hardness of their crowns may be ascertained by the resistance similar parts of each offer to the engine bits ; and a comparison of the general features of the roots of these teeth will also be instructive. It is true that a child, when this organ is undergoing calcification, may be the subject of disease, and the tooth may on this account suffer. And although the destiny of the tooth may thus be altered, yet the application, not the abandonment, of remedial treatment is surely indicated.

When the first permanent molar is about to be erupted, it lies embedded in the gums, projecting but little, and does not yet articulate with its natural antagonist. The deciduous teeth arrayed in front of

it, often infested with caries, seem at times to menace its very existence. Did the second molar come into place under like disadvantages, it would probably be rendered useless as quickly and as frequently. It is well known that when the conditions of decay are present caries may attack the whole or nearly the whole of a set of teeth, which has hitherto entirely escaped. It is on this account chiefly that the first molar so soon and so frequently suffers. When it escapes caries till all the deciduous teeth have fallen, it stands on as secure a footing as its posterior neighbour.

Where there is crowding of the teeth, and where this condition has not received treatment till the second permanent molar has appeared, it will be injudicious to let this state of matters continue longer. Since extracting the incisors, and to a less but still considerable degree the canines of the upper set, at any rate causes disfigurement, usually a tooth further back is removed. If there is already a tooth misplaced, then that should as a rule be simply extracted. But as it happens that the first molar is never misplaced, it can never be extracted for this reason. The first bicuspid is obviously the tooth which would relieve this condition best, and decay in it would form plausible grounds for its immediate removal. Then come the second bicuspid and the first molar. If the molar were decayed and the bicuspid intact, it would be judicious to extract the molar, and more especially if the decay were distal and the pulp exposed. But were the proximal aspect of the molar and the distal side of the bicuspid both carious, the bicuspid should be extracted and the molar filled. It may be remarked here, in addition, that when the wisdom tooth is confined for space and cannot itself be removed, that the second molar is the natural victim.

The effects which supervene after the premature extraction or decay of the first permanent molar, also point to the conclusion that it should, for some time at least, be preserved. When these teeth are early lost, the almost invariable result is that the bite becomes abnormally close. Other deviations from the normal state also follow the early loss of the first permanent molars, depending on such conditions as the defective resistance of the teeth behind or in front of the molars, and the original relative position of the upper and under jaws, whether the latter tends to be underhung or the contrary. When the loss of the molars is on one side only, the vertical incidence of the teeth tends to be disturbed. And it is by no means rare to see instances where such changes detract from the appearance of the individual.

It is true that if this is the only tooth wanting, the disposition of the remaining teeth may even be quite natural. But there can be no doubt that in such a case the face does not reach its full development. I can call several instances to mind where not only the first molars are wanting, but several of the others, and although there are

but small vacant spaces in the alveolar arches, nevertheless there seems to be a marked want of development of the face as a whole.

It will be readily admitted that there is a relationship between function and structure; that want of function or perverted function will be attended with a degenerate form, and that proper function will be attended with regenerate form. Now, the lower jaw is articulated to the base of the skull by the temporo-maxillary articulations. The sphenoid bone lies between the two temporal bones and forms with them the central transverse portion of the basis cranii. In order that the temporal articular surfaces may recede from each other at the same rate as the condylar surfaces of the under jaw do when growing backwards, bone is deposited in the spheno-temporal suture. The muscles of mastication are almost exclusively attached to these bones. The proper development of these bones depends on the natural action of the muscles attached. If, for example, the four first permanent molars are early lost, the food is divided by the anterior teeth by a vertical, rather than by a rotatory, action of the lower jaw. The temporal and masseter are used rather than the pterygoid muscles. A certain deformity will inevitably ensue. I am much inclined to think that in those cases where the facial development is arrested by the loss of teeth, that the base of the skull to which the pterygoid muscles are principally attached is to some extent diminished also. And I have no hesitation in saying that there is much which might be said to show that the proper action of these muscles, and as a consequence, the proper development of the rigid parts concerned, is best secured by the first permanent molar fulfilling its intended function.

Mr. JAMES R. BROWNLIE remarked that the care of the first molar is perhaps one of the most important problems in the way of preserving the teeth, that we have to deal with. More than any other tooth it calls for the education of the public. Its usual history is to be let alone till pain compels its extraction, in the belief that it is a first tooth and will have a successor. Inherent weakness makes it an easy prey to such neglect, and the decision we are called upon to make is usually *when* we ought to extract it. If, however, we may follow another course, Mr. Fergus has named the plan I prefer to follow—to fill it with a plastic material, copper by preference, till at a later period its behaviour under such treatment may afford some indication of what the further treatment should be. Some anxiety has been expressed in the paper about the effect of extraction upon the bite, but, I think, the bite may fairly be left to care for itself, especially under the symmetrical extraction of these teeth. The more important consideration is the effect we can produce upon the others. Freedom from pressure, if not isolation, of the teeth is a most desirable aim, and recognising the strong forward tendency of what we call the back teeth, it has always been my aim to keep in these teeth till the second molars were

fairly in place. Should pressure exist there will thus be time for relief before the second molar can close up on the bicuspid. If the tooth must be sacrificed earlier, then the second molar will simply occupy the gap, that way into position offering least resistance probably. The possibility of being able to save such teeth for a length of time, should, I think, always be clearly established, as they occupy the best working position in the jaw ; and the early failure of preservative treatment, and the prolonged existence of gaps where these teeth formerly were, consequent upon such failure, must be deemed a greater calamity than a diminution in number, provided the extraction has been done in time to ensure the second and third molars moving forward a place.

Messrs. J. A. BIGGS, W. S. WOODBURN, J. S. AMOORE, JAMES WALLACE, GRAY, and REES PRICE, also contributed to the discussion, and Mr. Fergus was thanked for his paper.

Mr. THOMAS WILSON, Glasgow, exhibited a water motor, which he had designed to work the dental engine arm, and explained that it was an engine of the diagonal type (not oscillating) having two cylinders lying at an angle of  $90^\circ$  to each other. Cylinders  $1\frac{1}{4}$  inch bore, stroke  $1\frac{1}{2}$  inch. The engine is driven with double piston valves, which are, with the main piston, so carefully fitted as to render them practically frictionless. The said valves work in a sleeve or ferrule having the water passages or "ports" cut out, leaving bars or bridges to guide the valves when in motion. The valves of both cylinders receive their motion from one eccentric as usual in small diagonal engines, and are connected to the valve spindles by connecting rods, allowance being made for careful adjustment of valves with a screw and jam nut. The main pistons, piston rod and guide crosshead are cast in one piece. The crank is of the disc kind, having a steel crank pin  $\frac{3}{8}$  inch diameter. The cylinders and most of the parts are made in gun metal. The engine when on trial gave 84 revolutions per minute with a pressure of 9 lbs. per square inch : 132 revolutions with a pressure of 18 lbs. per square inch : 280 revolutions with a pressure of 46 lbs. per square inch. An ordinary spear-pointed drill, fixed in the handpiece, easily bored a hole  $\frac{1}{16}$  of an inch in diameter, through a piece of ivory  $\frac{1}{4}$  inch thick, with a pressure of 15 lbs. per square inch. When the water was turned off and on, the engine stopped and started immediately.

Mr. WILSON intended applying an arrangement for reversing the burr in the handpiece, with a motion as instantaneous as the stopping and starting of the engine. He also expected to have the speed greatly accelerated with the motors now being constructed. The motor shewn was the first one made.

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## Western Counties Branch.

A MEETING of the Council was held at the Royal Hotel, College Green, Bristol, on Saturday, April 19th, at 2.30 p.m., The President, Mr. J. C. OLIVER, of Cardiff, in the chair. Mr. John W. Seville, L.D.S.Eng., 12, Belvedere, Bath, was elected a member of the Association, and it was resolved that the annual meeting of the Branch for this year be for *business only*, and be held at the Rougemont Hotel, Exeter, on Wednesday, August 20th, at 6 p.m.

Subsequent to the meeting of the Council, a special meeting of members was held in connection with the arrangements for the annual meeting of the Association at Exeter this year. Mr. Oliver again occupied the chair, and the following Members were present :— J. Browne-Mason (Exeter); E. L. Dudley (Bath); J. M. Ackland (Exeter); A. Smith (Clifton); W. A. Hunt (Yeovil); H. P. Fernald (Cheltenham); Caleb Williams (Leamington); R. Rogers (Cheltenham); G. C. McAdam (Hereford); T. Cooke Parson (Clifton); E. Apperly (Stroud); Wm. Helyar (Bristol); A. Kendrick (Taunton); T. Garland (Exeter); F. H. Briggs (Torquay); W. J. Goodman (Exeter); J. J. H. Saunders (Barnstaple); F. H. Colwill (Ilfracombe); E. Goodman (Taunton); and Henry Mason (Exeter).

At the conclusion of the business Mr. BROWNE-MASON, of Exeter, detailed a curious case of absorption of the fang of a lower left bicuspid. On Oct. 22nd, 1889, he was consulted by a lady suffering from acute periodontitis in the above-named tooth, which had never been diseased in any way before; there was no caries, but the patient said that in eating a piece of bread some days previous to her coming to him she came on a foreign substance, and gave the tooth an "ugly jar," which caused much pain at the time, and kept up an irritated condition of the root of the tooth, that culminated in the attack for which she consulted him. He opened the pulp chamber and removed a dead pulp—ultimately stopping it, after the subsidence of the inflammation, with Weston's cement. All appeared to go on well until March, 1890, when on the 20th she called again, showing him the tooth become so loose that she asked for its removal, when the root was found to be entirely absorbed. He thought this an unusually quick case of destruction of the root by absorption—consequent on inflammation of the peridental membrane.

Mr. Browne-Mason also showed an upper set of artificial teeth mounted in vulcanite on gold plate, showing the adaptability of the American countersunk teeth to imitate irregularities in the dental arch, and expressed regret that such useful and extremely natural shapes should not have commended themselves more to the profession, as he had found them very satisfactory in use as well as natural in appearance. The case shown was a duplicate case made for a lady, and he had the greatest difficulty in procuring a match for



the first set, from the teeth in question not being taken up by the profession sufficiently to induce the depôts to keep a stock of them. He thought that it was possible this was in a measure owing to their adaptability not being generally recognised.

Mr. A. Kendrick's communication appears as a Case in Practice in the present issue.

The members present subsequently dined together in the hotel.

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### The Scottish and West of Scotland Branches.

THE annual meetings of the Scottish and West of Scotland Branches will be held on Friday, June 6th, at the George Hotel, Kilmarnock.

The meeting of the Scottish Branch will be held at 4 p.m. for the reception of the Treasurer's and Hon. Secretary's reports and the election of office bearers.

The meeting of the West of Scotland Branch will be held immediately on the conclusion of the first meeting, when the Treasurer and Hon. Secretary will submit their reports and office bearers for the ensuing year elected.

Mr. J. A. Biggs, Glasgow, will demonstrate Buttner's method of pivoting teeth, with great improvements devised by himself.

Mr. P. L. Walker, Dundee, will show his valve covers for the safe and easy transit of nitrous oxide cylinders. He will also show a new mouth gag, both for children and adults.

Other matters of practical interest are in course of arrangement.

The members of the two branches will dine together in the George Hotel, Kilmarnock, at 6.30 p.m., under the chairmanship of Mr. J. Moore Lipscomb, L.D.S.Eng., Kilmarnock, President of the West of Scotland Branch. William H. Williamson, M.D., L.D.S.Edin., Aberdeen, Vice-President of the Scottish Branch, will be croupier. Tickets 5s. 6d. each. Morning dress.

The George Hotel has very good accommodation, and rooms will be reserved on writing beforehand.

The train connections between Inverness, Dundee, Aberdeen, Edinburgh, Glasgow, and Kilmarnock will be printed on the circular to be sent later to members.

On Saturday, June 7th, it is proposed to have an excursion by coach to Ayr and the "land o' Burns." The coach or coaches will leave Kilmarnock between 10 and 11 a.m. Tickets will not exceed 4s. each.

The members of the Association resident in Ayrshire have invited the members to meet them at lunch in the Station Hotel, Ayr. Members can either return home from Ayr or Kilmarnock. Fuller details will be given in the circular.

W. BOWMAN MACLEOD, *Hon. Sec. Scottish Branch.*

REES PRICE, *Hon. Sec. W. Scotland Branch.*

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**Eastern Counties Branch.**

THE Annual General Meeting will be held at Lowestoft, on Wednesday, June 25th.

Particulars regarding the programme will be published in next month's Journal. Any member of the Association, desiring to bring forward any communication, or having any object of interest to exhibit, will oblige by giving particulars to the Hon. Sec.,

W. A. RHODES.

53, *Trumpington Street, Cambridge.*

**Midland Counties Branch.**

HAVING received no report of the meeting of the Midland Branch held at Derby, owing to the close proximity of the date of meeting to the publication of the Journal, we much regret the matter will be unavoidably delayed until next month.

**ORIGINAL COMMUNICATIONS.****Hypnotism used by Dr. Milne Bramwell as an Anæsthetic during Surgical Operations.**

THE following report of a very important meeting held in Leeds as a result of Mr. W. A. Turner's visit to Dr. Bramwell at Goole, to test the practical use of hypnotism for operations—a brief account of which we published in our last issue—occurs in the *Lancet* and *British Medical Journals* for Saturday, April 5th.

[*Extract.*]

*Leeds, March 28th, 1890.*

A number of the leading medical men and dentists of Leeds and district were brought together this afternoon, through the kind invitation issued by Messrs. Carter Bros. and Turner, dental surgeons, of Leeds, to witness a series of surgical and dental operations performed in their rooms, under hypnotic influence, induced by Dr. Milne Bramwell, of Goole, Yorkshire.

Great interest was evinced in the meeting, as it is well known that Dr. Bramwell is quite a master of the art of hypnotism as applied to medicine and surgery, and is shortly to publish a work of considerable importance on the subject.

Upwards of sixty medical men and dental-surgeons accepted the invitation. Amongst those present were:—Dr. Eddison,

M.D., Senior Physician Leeds General Infirmary ; Mr. Pridgin Teale, F.R.C.S.Eng., F.R.S., M.A.Oxon., Senior Surgeon Leeds General Infirmary ; Dr. Braithwaite, M.D.Lond., late Vice-President Obstetrical Society, London ; Dr. Chadwick, M.D.Lond., M.A.Oxon. ; Mr. Mayo Robson, F.R.C.S.Eng., Examiner in Surgery Victoria University ; Dr. Jacob, M.D.Lond., M.A.Oxon., Physician Leeds Infirmary ; Mr. Scattergood, M.R.C.S.Eng., Dean of Leeds Medical School ; Dr. Hellier, M.D.Lond., M.R.C.S.Eng. ; Mr. Littlewood, F.R.C.S.Eng., L.R.C.P.Lond. ; Dr. Griffiths, M.D., C.M., Professor of Anatomy Leeds Medical School ; Dr. Ramsay, M.D., C.M., M.A. (of York) ; Mr. Hewitson, M.R.C.S. Eng., Ophthalmic Surgeon Leeds Infirmary ; Dr. Dobson, M.B.Lond., M.R.C.S.Eng. ; Mr. McGill, F.R.C.S.Eng., Professor of Surgery Leeds Medical School ; Mr. Nunneley, M.D.Lond., M.R.C.S.Eng. ; Mr. Hartley, M.B., Lond., B.S., M.R.C.S.Eng. ; Mr. Ward, M.B., B.C., M.A.Cantab. ; Dr. Barrs, M.D., Physician Leeds General Infirmary ; Mr. Pryce, M.R.C.S. Eng., L.S.A. (of Pontefract) ; Mr. Herbert Robson, L.R.C.P., M.R.C.S.Eng. ; Mr. Godfrey Carter, L.R.C.P., M.R.C.S.Eng. (of Ilkley) ; Dr. Wells, M.D.Lond. ; Dr. Chas. Turner, M.B., C.M. Edin. (Menston Asylum) ; Dr. Cheetham, M.D., M.R.C.S.Eng. (of Guiseley) ; Dr. Churton, M.D., Physician Leeds Infirmary ; Mr. Chas. Wright, M.R.C.S.Eng., Lecturer on Midwifery Leeds Medical School ; Dr. Bampton, M.D. (of Ilkley) ; Mr. Foster, F.R.C.S. (of York) ; Dr. Light, L.R.C.P., M.R.C.S.Eng., Resident Physician Leeds Infirmary ; Mr. Henderson Nicol, L.D.S. Eng. ; Mr. King, L.D.S.Eng. (of York) ; Mr. Glaisby, L.D.S.I. (of York) ; Mr. Sherburn, L.D.S.I. ; Mr. McAlpin, L.D.S.Eng. ; Mr. Wm. Hall, M.R.C.S.Eng. ; Mr. Wyles, L.D.S. ; Mr. Robinson, M.R.C.S.Eng. ; Mr. Roberts, M.R.C.S.Eng. ; Mr. Holmes, M.R.C.S.Eng. ; Dr. Caddy, L.R.C.P.Lond. ; Dr. Thompson, L.R.C.P. ; Mr. Bates, M.R.C.S.Eng. ; Mr. Best ; Mr. Gott ; &c., &c.

A letter expressing regret at his inability to be present was read from Dr. Clifford Allbutt, LL.D., F.R.S., in which he reminded the meeting that he remembered the time, thirty-five years ago, when Lister performed several serious operations, using hypnotism as the anæsthetic, at the hands of a scientific lay friend in Lincolnshire.

The object of the meeting was to show the power of hypnotism to produce absolute anæsthesia in very painful and severe operations.

The first case brought into the room was a woman of twenty-five. She was hypnotised at a word by Dr. Bramwell, and told she was to submit to three teeth being extracted by Mr. T. Carter, and further, that she was to do anything Mr. Carter asked her to do (such as to open the mouth and spit out, and the like), as he required her. This was perfectly successful. There was no expression of pain in the face, no cry, and when told to awake, she said she had not the least pain in her gums, nor had she felt the operation. Dr. Bramwell then hypnotised her, and ordered her to leave the room and go upstairs to the waiting room. This she did as a complete somnambulist.

The next case was that of a servant girl, aged nineteen, on whom, under the hypnotic influence induced by Dr. Bramwell, Mr. Hewitson had, a fortnight previously, opened and scraped freely, without pain, a large lachrymal abscess extending into the cheek; furthermore, the dressing had been daily performed, and the cavities freely syringed out under hypnotic anæsthesia, the "healing suggestions" being daily given to the patient, to which Dr. Bramwell in great part attributes the very rapid healing, which took place in ten days—a remarkably short space of time in a girl affected by inherited syphilis, and in by no means good state of health. She was put to sleep by the following letter from Dr. Bramwell addressed to Mr. Turner, the operating dentist in the case.

[COPY OF LETTER TO MR. TURNER.]

*Burlington Crescent, Goole.*

DEAR MR. TURNER,—I send you a patient with enclosed order, when you give it her, she will fall asleep at once, and obey your commands.

(Signed)

J. MILNE BRAMWELL.

[COPY OF ORDER.]

Go to sleep by order of Dr. Bramwell, and obey Mr. Turner's commands.

J. MILNE BRAMWELL.

This experiment answered perfectly. Sleep was induced at once by reading the note, and was so profound, that at the end of a lengthy operation, in which sixteen stumps were removed, she awoke smiling, and insisted that she had felt no pain, and what was more remarkable, there was no pain in the mouth. She was found after some time reading the *Graphic* in the waiting room, as if nothing had happened. During the whole time she did everything which Mr. Turner suggested; but it was observed that there was a diminished flow of saliva, and that the corneal

reflexes were absent, the breathing was more noisy than ordinary, and the pulse slower.

Dr. BRAMWELL took occasion to explain that the next patient, a boy of eight, was a severe test, and would not probably succeed, partly because the patient was so young, and chiefly because he had not attempted to produce hypnotic anæsthesia earlier than two days before. He also explained that patients require training in this form of anæsthesia, the time of training or preparation varying with each individual. However, he was so far hypnotised that he allowed Mr. Mayo Robson to operate on the great toe, removing a bony growth and part of the first phalanx, with no more than a few cries towards the close of the operation, and with the result that when questioned afterwards he appeared to know very little of what had been done. It was necessary in this case for Dr. Bramwell to repeat the hypnotic suggestions. Dr. Bramwell remarked that he wished to show a case that was less likely to be perfectly successful than the others, so as to enable those present to see the difficult, as well as the apparently easy and straightforward cases.

The next case was a girl of fifteen, highly sensitive, requiring the removal of enlarged tonsils. At the request of Dr. Bramwell, Mr. Hewitson was enabled, in the hypnotic state to excise each tonsil with ease; the girl, by the suggestion of the hypnotiser, obeying every request of the operator, though in a state of perfect anæsthesia. In the same way Mr. Hewitson removed a cyst, the size of a horse-bean, from the side of the nose of a young woman who was perfectly unconscious, breathing deeply, and who on coming round by order protested "that the operation had not been commenced."

Mr. TURNER then extracted two large molar teeth from a man with equal success; after which Dr. Bramwell illustrated several interesting phenomena with this patient, who was a strong working man.

Mr. T. CARTER then extracted a very difficult impacted stump from a railway navvy, as successfully as the previous case. Dr. Bramwell described how this man had been completely cured of very obstinate facial neuralgia by hypnotism. The malady had been produced by working in a wet cutting, and had previously defied all medical treatment. On the third day of hypnotism the neuralgia had entirely disappeared (weeks ago) and had not returned. The man had obtained also refreshing hypnotic sleep

at night, being put to sleep by his daughter through a note from Dr. Bramwell, and on one occasion by a telegram, both methods succeeding perfectly.

At the conclusion of this most interesting and successful series of hypnotic experiments, a vote of thanks to Dr. Bramwell for his kindness in giving the demonstration, was proposed by Mr. SCATTERGOOD, Dean of the Leeds Medical School, and seconded by Mr. PRIDGIN TEALE, F.R.S., who remarked that the experiments were deeply interesting and had been marvellously successful, and said, I feel sure the time has now come, when we shall have to recognise hypnotism as a part of our study.

The vote was carried by loud acclamations. Messrs. Carter Bros. and Turner were cordially thanked for the great scientific treat which they had so kindly prepared for the many to whom hypnotism had been first introduced that day, and for the further opportunity afforded to the few who had seen Dr. Bramwell's work previously, of studying its application as an anæsthetic.

Mr. HENRY CARTER replied for himself and his partners, and the meeting closed; the patients, looking as little like patients as persons well could, giving neither by their manners, nor expression the slightest suggestion (except when external dressings were visible) that they had suffered, or were suffering from, in some instances, extensive surgical interference.

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## LEGAL INTELLIGENCE.

### Partridge v. General Council of Medical Education and Registration.

THIS was an appeal from the judgment of Mr. Baron Huddleston at the trial of the action. The action was brought for unlawfully and maliciously removing the plaintiff's name from the Dentists' Register kept by the defendants under the Dentists Act, 1878. It appeared that in 1868 the plaintiff commenced practising as a dentist in London, and under the Dentists Act, 1878, for the first time a register of dentists was required to be kept. The plaintiff was at this date engaged in practising dentistry, but he did not wish to be entered on the Register in respect of having so practised, and accordingly he passed an examination and obtained a diploma from the Royal College of Surgeons in Ireland as a

licentiate in dental surgery, and was entered on the Dentists' Register in respect of this qualification. Every applicant for a diploma is required by the Royal College of Surgeons in Ireland to declare that if the diploma is granted he will not seek to attract business by advertising or by any practice considered by the College to be unbecoming, and that he agrees that the diploma shall be cancelled on its being proved to the satisfaction of the President and Council of the College that he has done so. The plaintiff entered into this undertaking. In 1883 the plaintiff became suddenly blind, and was unable to attend personally to his practice. He thereupon started a dental institution in South Kensington, and employed qualified assistants, whom he paid. He advertised this Institution. In July, 1885, the College of Surgeons in Ireland withdrew the plaintiff's diploma on the ground that he had advertised in connexion with his profession, and notified this fact to the General Council of Medical Education and Registration. This latter body, upon the ground that the plaintiff had lost his qualification, on June 2nd, 1886, ordered his name to be erased from the Dentists' Register. A *mandamus* was granted by the Court directing the Council to restore the plaintiff's name to the Register on the ground that they had not held any inquiry and had not acted under Sections 13 and 15 of the Dentists Act 1878. The case is reported in 19 Q.B.D., 467. The plaintiff's name was accordingly restored to the Register on September 18, 1887, and the plaintiff brought this action to recover damages for the wrongful erasure of his name during this period. The General Medical Council subsequently held an inquiry under Section 15 of the Act, and on November 25th, 1887, ordered the plaintiff's name to be removed from the Register. The action was tried before Mr. Baron Huddleston without a jury, and he held that the action was not maintainable without evidence of malice, and gave judgment for the defendants. The plaintiff appealed.

Mr. WADDY, Q.C., and Mr. LYON, for the plaintiff, contended that the defendants were acting not in a judicial capacity, but in a ministerial capacity, in removing the plaintiff's name from the Register, as they did not purport to act under Sections 13 and 15. Secondly, if the defendants were acting as a *quasi-judicial* body, the fact of their removal of the name without any inquiry was evidence of malice. The trial was begun with a jury, when the learned Judge said that he was prepared to nonsuit the plain-

tiff on the ground that there was no evidence of malice. To enable the plaintiff to appeal straight to the Court of Appeal, the jury were discharged by consent and the Judge gave judgment for the defendants. But it must be taken as if the Judge held that there was no evidence of malice to go to the jury, and if he was wrong in that there should be a new trial.

Mr. REID, Q.C., and Mr. MUIR MACKENZIE, for the defendants, contended that, whether the defendants acted under Section 11, or under Section 13 in erasing the plaintiff's name, they were not acting in a merely ministerial capacity, but were acting judicially.

The COURT dismissed the appeal.

The MASTER OF THE ROLLS said that the case was being tried with a jury, when, for a reason which he could never understand, the case was left to be tried by the Judge without the jury. That was equivalent to treating the case as if the jury had never been there, and the question whether or not there was evidence of malice to go to the jury could not arise. The Judge must have found, and must be taken to have found, that there was no malice. No one could possibly suggest any malice. There was, therefore, no malice in fact. Then how did the defendants fulfil the duty imposed upon them by the statute? He would undertake to inform them how they ought to act when inquiring whether a name should be erased from the Register. They ought to make careful inquiry whether there was any ground for doing so, and they ought to communicate with the person against whom any accusation was made and ask for his explanations. He did not go so far as to say that they ought to hear the witnesses, if there were any, in the presence of the accused, but they ought to communicate the evidence to him and ask for his explanations upon it. They ought to do this before deciding to erase a name. It was quite clear that the defendants had not done in this case what they ought to have done, and the Court had granted a *mandamus* to re-insert the plaintiff's name in the register. But it was quite a different question whether an action would lie against the defendants for having acted wrongly. The duties were imposed upon them by the Dentists Act, 1878, and they were intending to act under the Act. Assuming that they were acting under Section 13, then, in his opinion, they were acting in a judicial capacity. It was said that they intended to act under Section 11, and not under Section 13. In his opinion, if they intended to act under the Act, and erroneously acted under the



wrong Section, they would not be liable if the act was not merely ministerial. But assuming that they acted under Section 11, was their act a merely ministerial act? He thought clearly not. In his opinion the giving an order to the Registrar under that Section was not a merely ministerial act, but depended upon the exercise of their discretion. This proposition seemed to him to be true—that where a public duty was imposed upon persons by statute, and that duty consisted in the exercise of a discretion, the act done in performance of that duty could not be said to be merely ministerial, but must for the purposes of protection be considered as judicial. The protection could only be got rid of by showing that the act was ministerial. The protection, therefore, existed in this case, there being no malice, and the appeal must be dismissed.

LORD JUSTICE FRY agreed that where there was a public duty imposed by statute, and a discretion conferred in the exercise of that duty, the duty was a judicial and not a ministerial duty. The scheme of the Dentists Act was that the Registrar should perform the ministerial acts, and the duties of the General Council with respect to the Registrar were of a judicial character. The General Council in this case seemed to have considered that the Register must automatically follow the qualification, and that they had power to make such corrections by giving an order to the Registrar to that effect. They were wrong, but they were exercising a discretion in giving the order to the Registrar which the statute conferred upon them. The General Council had no duties in connexion with the Register which were not discretionary in their nature. In his opinion, for these reasons the General Council were acting in the exercise of a discretion imposed upon them, and were therefore acting judicially. The action, therefore, would not lie without proof of malice.

LORD JUSTICE LOPES concurred.

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### The First Prosecution under the New Zealand Dentists Act.

THE first prosecution under the New Zealand Dentists Act for the unlawful assumption of the title of dentist marks an epoch in the colonial history of this branch of the medical profession. In Christchurch, on March 6th, J. D. Hellewell was charged before

Mr. R. Beetham, R.M., on the information of Audley Edward Merewether, that, not being a legally qualified medical practitioner, and not being registered under "The Dentists Act, 1880," nor under any other legal enactment, he did unlawfully use the title of dentist. Evidence was taken, Mr. Joynt appearing for the informant, Mr. Widdowson for defendant. The Bench imposed a fine of £5, with costs. This conviction practically dispels the opinion that a "carriage and four" may be driven through the New Zealand Dentists Act with impunity, and will cause less surprise than the long delay in testing this question, and that initial proceedings should be left to the sole responsibility of a dental student. In June last, at a meeting of dental delegates held in Wellington, a New Zealand Dental Association was formed upon the bases of the British Dental Association, and which a few weeks ago held its first conference at Dunedin. One of the primary objects of this Association is to maintain the provisions and carry out the intention of the Dentists Act, in other words to prevent the use of the title of Dentist, or any equivalent thereof, and the practice of dentistry by any but legally qualified persons, that is, by persons whose names appear upon the Dental Register of New Zealand, or upon that of the United Kingdom, or Imperial Register. At the recent conference several cases were cited of at least *prima facie* gross violations of that Act, demanding prompt legal action. Was the Association prepared to institute proceedings? The Dentists Act, it was said, though evident as to intention, was inexact and incomplete in its wording, and could be evaded; that, as it now stood, it would be impossible to obtain a conviction. Eminent legal opinion, it was believed, had confirmed this impression. It was decided to obtain further legal opinion. Accordingly, the question of the adequacy of the Act as now worded, and of the legal liability of the alleged cases of violation, was placed before Sir Robert Stout, who held that the Act as it now stood was quite adequate to deal with such cases, and that where the Act was as he deemed defective an amendment could be readily drafted and make "assurance doubly sure." Events, however, moved faster than the action of the Association. The Association, it was thought by some, was cautious to timidity. It was rightly felt by dental students, who, at great cost, were loyally complying with the conditions of the Act, and in some instances seeking higher qualifications than the Act demanded, to be a

gross injustice that others who had not complied with those conditions, and who held no legal qualification whatever, should be allowed to practise as if duly registered and qualified. Better no law than a law any man sufficiently unscrupulous could evade with safety. It was simply the deep sense of this injustice, and probably a degree of impatience at the cautious step of the Association, that led Mr. Merewether, a dental student of Christchurch, to institute, solely on his own responsibility, the above prosecution. The premature and widespread decay and loss of the teeth in this and other Australasian colonies is on all hands acknowledged and deplored. How far this miserably defective dental condition affects the public health in these colonies it is impossible to tell—that it does so to a serious and depressing extent cannot be doubted. Yet the difficulty of preserving the teeth is great, and becomes greater every year. This is the vocation of the dentist, his most legitimate as it is his most beneficent task—how difficult and important, and how necessary and reasonable the public demand for the best possible skill and treatment, is shown by the fact that throughout Europe and America the standard of qualification has been raised higher and higher.—*New Zealand Herald*.

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#### Claim for Rent.

CROYDON BUILDING SOCIETY v. GOODMAN.—This was a claim for £13 15s., for one quarter and a-half's rent for rooms at 92, North End. An agreement was put in showing that Dr. J. Wilks, who represented himself as the manager of the Dental Supply Company, took the rooms on behalf of that company at a rental of £50 a year. That company, it was stated, was composed of the defendant, Mr. Goodman, and two others whom they had difficulty in finding, and therefore they sued Mr. Goodman, treating Dr. J. Wilks as his agent.

Mr. BLACK said the defence was that the defendant, Mr. Goodman, was not a member of the Dental Supply Company, and gave no instructions for the taking of these rooms.

Various letters were put in on behalf of plaintiffs, including one from the defendant, dated the 3rd of December, in which he stated that Mr. Wilks was not in his employ, nor was he then a member of the Dental Supply Company at Croydon. Another letter from

Mr. Wilks, dated 30th December, stated that he was sorry to say, from circumstances over which he had no control, that he was unable to begin business in Croydon as the Dental Supply Company, and enclosing the key of the premises, together with £5 for his liability. That, Mr. Bower (counsel for plaintiffs) said, of itself would show that Wilks was the tenant, but they had a clerk to show that the money was actually paid on behalf of the defendant Goodman, and that the ingenious trick was resorted to in order to evade the liability of the latter. Mr. Bower stated that in the rooms at North End were found some papers advertising a "revolution in dentistry."

His HONOUR : A blessed one, I hope.

Mr. BOWER : A bloodless one. Those advertisements were exactly the same as those issued by Mr. Goodman at Ludgate Hill, where he practised, the only difference being that Mr. Goodman's name was on those issued at Ludgate Hill, and that of the Dental Supply Association, Croydon, on those found on the premises at North End.

Mr. BLACK then stated the defence, that Wilks was not at the time he took the rooms in the employ of the Dental Supply Association, but that he intended to set up for himself, and adopted that title as he was not a registered dentist.

Evidence was called in support of the above statement, and his Honour then summed up. He said in this case the defendant was sued for certain rent due under an agreement which was made by a man of the name of Wilks, purporting to be carrying on business as "The Dental Supply Association," in premises at North End. Wilks did not remain there very long, in fact he levanted without paying the first quarter's rent. The defendant Goodman was sued in consequence for this rent, when he replied that Wilks had no authority from him to pledge his credit, and further that he was never a member of the firm of the Dental Supply Association at Croydon, although he knew Wilks. Mr. Goodman had been called, and he said that he had been carrying on business with his brother in St. Paul's Churchyard, under the name of the Dental Supply Association, but that the Association had been dissolved nearly two years ago, and that it never had anything to do with the Dental Supply Association at Croydon. It was a grave question as to how far Mr. Goodman was to be believed, and he (his Honour) regretted that he had come to the conclusion that Mr. Goodman was not a gentleman whose word

could be accepted. In the first place, Mr. Goodman, according to his own confession, was asked whether he considered Mr. Wilks a fit and proper person to rent the premises, and he was bound to tell the simple truth. But what did he do? He knew that Wilks had been a failure at West Bromwich, and was in an impecunious state; but he sat down in a deliberate manner and gave Wilks a good character, stating that he would be found a good and reliable tenant. That was not the action of an honest man, but was most dishonourable and dishonest, and he believed it was written solely for the purpose of deceiving Mr. Auber. There was another point in the case, why did Goodman pay £5? It might have been a good thing to do, but probably it was a case of conscience, but he did not pay it like a man, and tell the plaintiff "Well, I'm very sorry, Wilks is gone, and the affair is a failure." No! He went to some solicitor and sent the money as coming from a friend. The whole thing savoured of trickery, and was not done in a straightforward manner, and he (his Honour) could not but come to the conclusion that for certain purposes Dr. Wilks and Mr. Goodman were one and the same. He gave judgment for the plaintiff for the whole amount.

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### A Cheshire Farmer and His False Teeth.

A CASE was heard at Crewe County Court on April 9th, before his Honour Judge Hughes, in which the plaintiff was Charles Edwards, farmer, of Nantwich, who sought to recover £20 from Albert Maurice, dentist, of Liverpool, for the detention of a set of teeth. The plaintiff's evidence was that several years ago he bought a set of teeth for £15. The teeth were plated with gold and encased in vulcanite. A few months ago he went to the defendant and requested him to make some alterations in the upper case so as to make the teeth more comfortable. The alterations were made, and afterwards, at plaintiff's suggestion, the lower set was repaired. Subsequently, while sitting in the defendant's room, the plaintiff suddenly jumped up and demanded an explanation, stating that he had not received back his right set of teeth—that while his teeth were set in a gold plate and cost £15, the set produced were largely vulcanite, and there was not a pound's worth of gold on the case. There was a scene in the

defendant's office, and because the plaintiff declined to leave the defendant walked out. The plaintiff's wife and daughter described the original set of teeth with the gold plate. The defendant said that the gold on the old case had been placed on the new, and while he could not swear it was the same piece of gold, he believed it was. A man named Rigby, who modelled the case, said it was the same piece of gold, and that none of it had been taken away. The judge said that the action suggested a serious accusation against the defendant, for which there was no ground. He gave judgment for the defendant with costs.

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## PARLIAMENTARY INTELLIGENCE.

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IN the House of Lords, recently, Lord SANDHURST moved, "That a Select Committee be appointed to enquire, with regard to all hospitals and provident and other public dispensaries and charitable institutions within the metropolitan area for the care and treatment of the sick poor, which possessed real property or invested personal property, in the nature of endowment, of a permanent or temporary nature ; and to receive, if the committee thought fit, evidence tendered by the authorities of voluntary institutions for like purposes, or with their consent, in relation to such institutions ; and further, to inquire and report what amount of accommodation for the sick was provided by rate, and as to the management thereof ; and that the witnesses before the said Select Committee be examined on oath." He remarked that this was a formal motion to which the Government had agreed, and the reasons for which he had mentioned last year. There was one point, however, which he should like to mention—namely, that in putting forward this motion he approached the subject in no spirit of opposition to the hospitals. He knew the great straits in which they were placed, and what he wished to do was to lay bare all the facts, to strengthen worthy institutions, and, by taking the best advice, to suggest, if possible, some organisation which, by the co-operation of different institutions, might render the enormous resources of charity and the poor law more useful than at present.

The motion was agreed to, and the following peers were named of the committee on the motion of Lord Sandhurst :—The Arch-

bishop of Canterbury, Earl Cadogan, the Earl of Winchelsea and Nottingham, the Earl of Lauderdale, Earl Spencer, Earl Cathcart, the Earl of Kimberley, Lord De La Zouche, Lord Clifford of Chudleigh, Lord Sandhurst, the Earl of Erne, Lord Lamington, the Earl of Arran, Lord Monkswell and Lord Thring.

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## CASES IN PRACTICE.

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### Fracture of Lower Jaw with Loss of Bone.\*

By ALFRED KENDRICK, L.D.S.Eng., Taunton.

MR. PRESIDENT AND GENTLEMEN,—I wish to draw your attention to a case of broken jaw. The patient, a labouring man, was sent to me in August, 1887, by Dr. Prideaux, of Wellington. The history, as far as I could gather, was that the lower jaw had been broken some months previously by the wheel of a cart going over the man's head. He had been under treatment in a hospital to which no dental surgeon is attached, but had discharged himself some time before I saw him.



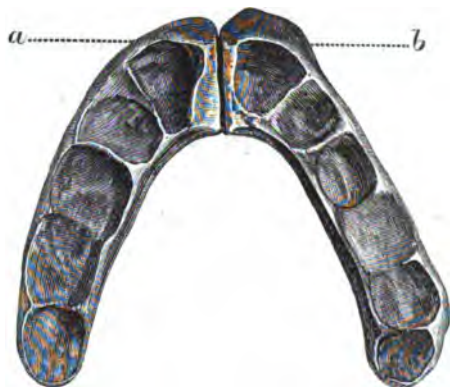
FIG. 1.

When he came to me he complained that his life was a burden to him, in consequence of not being able to masticate. On examination I found the bone missing between the first lower

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\* Read before the meeting of the Western Counties Branch at Bristol, on April 19th, 1890.

right bicuspid and the lower left canine, the two halves of the bone drawn close together by a dense mass of fibrous tissue in



VULCANITE SPLINT.

*a* indicates the position of screw, *b* that of the attachment.

such a manner that it was impossible for the teeth to articulate, as shown by model No. 1.



FIG. 2.

My object, of course, was to expand the lower jaw so as to restore articulation; and, with that object in view, I made a vul-



canite splint, capping the lower teeth with a Lee's screw in the centre. After it was vulcanized it was sawn down the middle, leaving the regulating nut in one half and attachment plate in the other half. This was then fitted to the mouth, the screw bar put in, and the patient directed to give it a turn every day or two. We had to make several splints, but I am sorry to say they have all been mislaid excepting the one shewn.

As the case progressed I found it necessary to extract the lower right bicuspid; and as the first lower right molar was very much decayed, it and the lower left molar stumps were also extracted. After expansion the jaw was as shown by model marked No. 2.

To this we made a lower vulcanite frame, restoring the bite. It is now about two years since the case was finished, and up till the present time the patient has worn the frame with great comfort, saying he can now eat perfectly well.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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### Odontological Society of Great Britain.

THE ordinary Monthly Meeting of the above Society was held at the Rooms, 40, Leicester Square, April 14th, 1890. Mr. FELIX WEISS L.D.S. (President) in the chair. Present a large attendance of members and several visitors. The minutes of the preceding meeting were read and confirmed. Mr. James H. Reinhardt, L.D.S.I., having signed the obligation book, was admitted a member.

The LIBRARIAN (Mr. Ashley Gibbings) announced he had received a number of invitations for members to attend the tenth International Medical Congress.

The CURATOR (Mr. Storer Bennett) announced the receipt of a skull of a rabbit from Mr. Robbins, showing an injury which had led to considerable overgrowth of the lower incisors, as well as excessive development of the upper ones, due to disuse; the left one was deflected to the right and crossed the middle line. This had led to absorption with the embedding of the tip into the hard palate on the right side. Another rabbit's skull, lent by the Editor of the *Field* was exhibited, the right lower maxilla presenting an ununited fracture, which had led to a similar overgrowth of the incisors, with perforation of the hard palate on the right side by the left upper incisor, the right upper incisor showed a previous fracture which had become united. A supernumerary tooth, presented by Mr. Redman, was exhibited,

which had occupied the space usually taken by the left upper incisor, the tooth was stunted, the apex of its fang looking as if invaginated into the crown. Microscopic sections representing various phases of caries presented by Mr. Henry Sewill were also exhibited.

Mr. SCOTT THOMPSON demonstrated a splice for dental engine bands.

Mr. MAGGS read the notes of a case of defective development of the permanent teeth, associated with malformation of the eyes and anus and exhibited models of the patient's dentition. The patient was a girl aged eighteen, the eldest of six children, of medium height, dark complexion and fairly developed head and face; hair dark in colour, full in quantity, fine in texture, nails well developed, congenital occlusion of the anus had been successfully overcome by operation. In the upper jaw were one temporary and six permanent teeth, all the incisors and permanent molars being absent, a temporary molar persisting between the pre-molars on the right side; there was absence of alveolar process between the canines, the palate was flat; in the lower jaw on the right side the incisors, second pre-molar and wisdom tooth were absent, but a caniniform supernumerary tooth was found between the canine and pre-molar; on the left side the canine, second pre-molar and wisdom tooth were absent. Mr. Brailey had contributed the following ophthalmic notes:—Each eye shows microphthalmos; there is almost complete absence of irides, but the lenses are present, each eye showed thirteen dioptrics of myopia, a condition not improved by spherical glasses, discs small, patches of opaque nerve fibres seen in the retina; vision defective; no evidence of a specific disease.

Mr. MAGGS remarked there was some difficulty in naming several of the teeth. The canine teeth were peculiarly peg-shaped, while the so-called pre-molars possessed distinct cusps on their outer masticating surfaces and simulated molars. There was general dwarfing of the teeth. The teeth were well covered with enamel and free from caries. The chief interest of the case lay in the malformation and defect of structures derived from epiblastic origin, viz., eyes, teeth and anus.

Mr. BARRETT showed a home-made electric lamp, consisting essentially of a sixteen-volt incandescent lamp with reflector placed behind and a convex lens in front mounted upon a wooden base, eight inches by three, and enclosed in a copper tube. The lamp was placed on a swinging arm by means of a ball and socket joint. The power was derived from a storage battery. The advantages possessed by this lamp over that which was placed within the patient's mouth lay in the absence of a light which would dazzle the operator and the freedom permitted in the use of the left hand.

Mr. Barrett also showed an ingenious artificial fulcrum of vulcanite, which he had constructed in order to elevate out the stump of a difficult lower wisdom tooth. The first and second molars were absent on the side of the tooth to be extracted, so that when an

attempt was made to extract with forceps under gas and failed, the effort to use the elevator had likewise proved fruitless. A small vulcanite side piece was then constructed to a model of the lower jaw and held firmly *in situ* by a lower bicuspid tooth which it embraced. The elevator was again tried, and the vulcanite piece acting as a fulcrum enabled Mr. Barrett to successfully remove the wisdom tooth.

Mr. HENRY SEWILL then made some remarks upon the etiology of dental caries, and projected upon a screen a number of very beautiful micro-photographs made by Mr. Andrew Pringle. He also expressed obligation to Mr. Pound, of King's College, who had assisted him upon the bacteriological side of his research. The slides exemplified various stages of developing teeth, as well as the presence of bacteria in carious teeth. Mr. Sewill emphasised that both upon pathological and anatomical grounds dental caries must be regarded as entirely due to external agencies. He deprecated the view that enamel possessed physiological elements capable of pathological action. The physical characters of enamel, the absence within it of anything beyond a trace of organic material, the impossibility of imagining physiological activity in the calcareous basis of such a material and the difficulty of believing in the conveyance of nutrient and waste materials to and from the dentinal fibrils seem to him to prove the truth of the views he had enunciated as to the origin of dental caries. Referring to the researches of Gallippe and Hoppe-Seyler, he thought that their method of estimating the density of the teeth at different periods of their existence was fallacious.

In conclusion, he drew attention to the researches of Professor Miller, and stated that a series of slides which he had received from Professor Miller and which were prepared from teeth rendered carious by artificial agency, could not be distinguished from sections of dental caries taken from the mouth. Mr. Sewill urged the importance of further investigation of the question, and hoped that increased facilities for research would induce more individuals to take it up.

After some complimentary remarks from the President, Mr. CHARTERS WHITE remarked upon the value of Mr. Sewill's communications and upon the beauty of Mr. Andrew Pringle's photomicrography. He (Mr. White) had at one period believed in the physiological origin of caries from within the tooth, but he now had recanted these views, and agreed with Mr. Sewill that one must look for the origin of caries in external agencies. He believed that some of the conditions present in teeth, and which had been shown in the photographs thrown upon the screen, such as granularity of the enamel, &c., rendered the teeth liable to attack from micro-organisms. Once such a condition being set up in the enamel, fermentation would keep the work in progress, the cavity would grow enlarged, the micrococci would multiply, and yeast ferments increase in number, while the acids which would thus be formed would act upon and decalcify the hard tissues of the tooth.

Mr. F. J. BENNETT spoke in high terms both of the communication and the illustrations, and pointed out that the work which Mr. Underwood had so ably prosecuted in the field of dental bacteriology had been done in conjunction with Mr. W. J. Milles, whose name must in that connexion be always associated with the name of Mr. Underwood. After a brief reply from Mr. SEWILL, and the passing of the usual votes of thanks, the meeting was adjourned until May 5th.

On May 5th the usual monthly meeting of the same Society took place at the rooms, 40, Leicester Square, Mr. FELIX WEISS, L.D.S. President, in the chair, while a large gathering of members and several visitors attended.

After reading and confirmation of the minutes of the last meeting, Mr. Denison Pedley having signed the Obligation Book was admitted a member. Messrs. J. O. Butcher, J. F. Colyer, John Greenfield, C. F. Rilot, R. Wynn Rouw were balloted for and elected members of the Society. The Librarian, Mr. Ashley Gibbings, announced the receipt of several books.

Mr. T. G. READ explained a method of making an all-gold crown illustrating a convenient way of making and using a model. A suitable model is most useful in crowning bicuspid and molars. Most of the work done in the following method can be accomplished in the absence of the patient. The metal band of the crown is roughly adapted to the stump, and feather-edged previous to fitting in the mouth. When about to crown a stump adjust the rubber-dam and fill the pulp canal, cut away the broken-down crown to allow for restoration of the occluding surface; two holes are drilled from the labial to the lingual surface—one at the mesial, the other at the distal part of the crown; the tooth substance between these is cut away; one blade of a pair of excising forceps is placed in the labial, the other in the lingual opening and the crown cut away; the sides of the stump as far as the band is to extend are made parallel, so that the crown may fit the stump. Then a strip of thin metal, *e.g.*, telephone plate, is trimmed and bent to the stump. When roughly fitted a small piece of composition is pressed to the band and stump, and bitten into; as soon as hardened it is removed together with the band. A lower and upper model from this, with a little band *in situ*, are made over this band. The metal band of the crown is made in coin gold to fit it to correspond with the gum edge, the band having been fitted to the model, the end of a stick of composition is softened and the band pressed on the edge to go under the gum uppermost; thus is feather-edged with a fine round file. Cusps of the crown are struck up out of a piece of coin gold and tried to the occluding model to see if the bite will ride, marked where it will and the cusps placed on the male die of soft metal, and the places marked knocked down. Some solder is filed up and mixed with Parr's flux, and the interior of the cusps filled. The patient is now seen and the band carefully fitted to the stump and soldered edge to edge,

using binding wire as a clamp ; the band is then contoured. If the canals have not been filled a piece of binding wire is twisted with a bead or two upon it around the band, and being placed on the stump used for fixing the rubber dam. The band is pressed upon a softened stick of composition occluding edge uppermost ; the surface is cut flat and the band removed from the composition and tried, and the occlusion made perfect. The cusps are placed on the soldering gridiron and the edge of the band boraxed and adjusted on the cusps. The work is held over a Bunsen burner, and the solder in the cusps melted so that union takes place with the band. If not perfect the lingual and posterior surfaces are built up with coin gold scraps and solder filings ; then boiled in acid, it is trimmed with corundum wheels and polished. The pulp chamber is grooved horizontally, dried and filled as well as the interior of the crown with oxy-phosphate and the crown pressed on to the stump with a notched tooth brush handle, and this is struck with a lead mallet to expel excess of cement. The setting being hard excess of cement is trimmed away.

Mr. COFFIN remarked that there appeared little if any novelty in the method just described, except the fitting of the base metal immediately and adapting around that the permanent gold crown. He thought this could be accomplished as easily in the initial instance as by the use of any other metal.

Mr. READ replied the filling of the telephone plate band was only roughly done, and urged the great advantage of the method he had described lay in the fact that an ordinary assistant could do most of the required work.

Mr. HARRY BALDWIN read the notes of a case of hyperostosis of the upper jaw. The patient was a woman aged thirty-nine ; the upper jaw was chronically affected by bony enlargement. The case had been under observation for eight years. When first seen the patient was wearing a partial upper plate of silver carrying the two central incisors and the first bicuspid on each side ; the right canine and the second bicuspid were standing and healthy. The plate was attached by a wire to the right second bicuspid, the stumps of the left canine and lateral incisor were present. The left alveolar process in the molar region was enlarged, while that containing the two stumps was much enlarged, the portion corresponding to the missing right lateral incisor slightly ; the enlargement was upon the outer side of the process, while that in the molar region extended downwards as well as outwards. There was no pain. The edges were rounded and ill-defined, hard to pressure, and covered with thin pale, smooth gum tissue. During the next four years the masses enlarged. The stumps were then extracted, their removal appearing to stimulate the growth ; enlargement continued until the seventh year, when more rapid increase in size occurred, whilst blue veins appeared pencilled over it. The case was then seen by Mr. Pearce Gould. The largest mass

then occupied the molar region on the left, and measured vertically one and a quarter inches, its general breadth at the base being the same. This mass impinged on the shrunken edentulous gum of the lower jaw; the nasal processes of the superior maxillary bones up to the inner angle of the eye were unduly prominent. There was doubt whether the case should be regarded as one of exostosis or hyperostosis. The patient being chloroformed, Mr. Gould incised the gum along the outer edge of the growth, denuding the bone with a raspator. The masses were then taken away piecemeal with cutting forceps and turned out to consist of spongy osseous tissue. The remaining teeth, together with the overgrowth in which they were, were then removed. Some hæmorrhage occurred, but was controlled by firm pressure; the gum flaps were sutured and readily united. The patient experienced no after pain. Mr. Baldwin remarked the future development of the case must prove of peculiar interest, as it would determine whether recurrence would occur—whether the growth were an instalment of a general overgrowth of the facial bones (leontiasis), whether a plate with artificial teeth would be tolerated and worn with comfort. Some features of the case gave a gravity to the prognosis. Microscopic examination of the bone removed revealed cancellous tissue, with wide spaces almost globular and lined with a smooth shining membrane, giving them almost a cystic appearance.

Seen under the microscope, sections of the canine and superadjacent tissue revealed an irregular network of bone, the interspaces being composed of (1) soft tissue composed of white fibres and cells, (2) true spaces lined by a fibrous membrane and probably filled with fluid.

An interesting feature about the case was the fact that the pressure of the plate had not either initiated or irritated the growth, for beneath it the tissues had remained normal.

The PRESIDENT then called upon Mr. Howard Mummery for his paper on the "Preparation of Microscopical Sections of Teeth."

Mr. HOWARD MUMMERY then read a valuable communication on the preparation of microscopic sections of teeth and bone, and illustrated it by means of some photographs which were projected upon a screen. Mr. Mummery said dry sections of bone, besides being unsatisfactory, involved a tedious process. In them the relations were lost between the cementum and dentine with the pulp and periodontal membrane. To study the developing tooth in which calcification has commenced, it is necessary to decalcify by means of an acid. Specimens so prepared are difficult to cut with a microtome without displacing the soft parts, and very thin sections are very difficult of attainment. Further, the decalcifying agent acts upon the tissues and more or less alters them. According to Dr. Black, they rob the tissues of that freshness so necessary for the gaining of good views of their constituents. Professor Moseley, of Oxford, had suggested the plan of hardening sections of teeth and bone by gradually increasing strengths

of alcohol, and then gradually impregnating them with a solution of dry Canada Balsam in chloroform. This was communicated without further particulars to Mr. Mummery by Mr. Charles Tomes.

A detailed account of this balsam process was published by Weil. Fresh or nearly fresh teeth are taken and divided below the neck by a sharp fret saw into two or three pieces, water being allowed to trickle over it the while. To get longitudinal sections the tooth is cut a little to one side of the pulp cavity, just opening this sufficiently to permit stains to penetrate. The pieces are then placed in concentrated sublimate solution in order to fix the soft parts. The sections are then washed in running water for about an hour and placed in 30 per cent. spirit for twelve hours and for the same time in 50 per cent.; then in 70 per cent. spirit. Then in 90 per cent. spirit with 1.5 to 2 per cent. of tincture of iodine which removes the black sublimate while the iodine is got rid of by a further soaking in absolute alcohol. Dr. Weil recommends a staining agent—alcoholic or watery solutions of borax carmine. Sections are then washed in running water for fifteen to thirty minutes, subsequently left in stain for two to three days, when they are transferred to acidulated 70 per cent. spirit and the watery stained ones remain in it twelve hours, the alcoholic twenty-four to thirty-six hours, to be then immersed for fifteen minutes in 90 per cent. alcohol, finally for half an hour in absolute alcohol, then for twelve or more hours in etherial oil. The etherial oil is washed away in pure zylol and the sections placed for twenty-four hours in chloroform; subsequently in a solution of balsam in chloroform. After prolonged treatment with the balsam, sections are cut with a fret saw under water and ground down. Mr. Mummery recommends washita stone for this purpose, using a piece of cork, or the finger and plenty of water. The debris being washed away the section is mounted in chloroform balsam. Aniline blue black is a useful stain, as it colours the fibres as well as the nuclei and connective tissue. Slides and transparencies were then shown, which exhibited many interesting points as well as exemplified the excellent results which this method of preparation is capable of yielding. Transparency 1 exhibited the transverse section of the pulp of a bicuspid. The odontoblast layer is seen lying in immediate contact with the tissue on the "borderland of calcification." In the next slide vessels are seen in the centre, thus showing that even delicate tissue can be retained *in situ* when this method is pursued. In another slide a vessel is seen involved in the line of odontoblasts, the semi-calcified portion of dentine being well seen and the rounded masses of the lime salts marking the line of complete calcification, while in the next slide coalescence of the globules is seen, thus forming complete calcification.

In another specimen, taken from a tooth extracted before the apex of the root was complete, the odontoblast cells with their nuclei are shown, lying not in close contact, but with distinct spaces between them,

thus supporting the view of Mr. Hopewell Smith, who in August, 1889, stated "between some of the cells of the membrana eboris there are wide visible spaces filled with homogeneous substance and small round and angular cells." Also Mr. Tomes had stated "there is not much room for any other tissue between them" instead of "there is no room between them" as expressed in a previous edition of his work. The next slides were concerned with the study of the periodontal membrane, the outer and more recently formed portions of the cementum are deeply stained, the penetrating fibres of Sharpey are well seen, between these bundles of fibres large cementoblast cells are seen; the appearances of some of Mr. Mummery's specimens, dealing with the development of dentine, were at variance with the ordinary views, there appeared to be processes of the connective tissue of the pulp adhering to the dentine very like the penetrating fibres of Sharpey. In the next photograph—from a transverse section of bicuspid—a line of little nests of round cells was seen lying among the fibres of the periodontal membrane, these agglomerations of cells lie at a little distance from the surface of the cementum, they differ in size and in the number of cells composing them; the groups of cells appear to be enveloped in a very delicate limiting membrane. Dr. Black regards these as of lymphatic nature, Malassez thinks them the remnants of the enamel organ. Other slides dealt with absorption and evidenced the value of the method for examining that process. The gradual increase in the strength of the alcohol and preliminary coagulation with the sublimate preventing shrinking. In one case groups of cells are seen prolonged deeply into the dentine, the individual cells are large and rounded in outline, in other parts where the excavations are not so deep ordinary multinucleated giant cells are seen lying in contact with the dentine. The excavations are clean cut and distinct, pointing to absence of softening action on the tissue beyond the point of contact. In adult teeth, in the cementum of healthy specimens, absorption and deposition seem to occur concurrently, absorption spaces being even filled with giant cells and old excavations filled up with newly deposited material. One slide—a longitudinal section of a molar and piece of bone of the alveolus—showed considerable excavation of the latter and absorption of the cementum, which is filled up with freshly deposited tissue, cementoblasts being crowded together on the newly formed cementum. Deposits of secondary dentine in the pulp were beautifully shown, the pulp in one specimen being densely packed with secondary deposits, some curious concentric radiating masses being apparent. A section of a tooth extracted from an old person showed the pulp converted into a semi-calcified material apparently of cartilaginous consistence, with islands of calcified tubular dentine. Reference was made to Mr. Salter's statement that many young and apparently healthy pulps show numerous deposits of secondary dentine which he regards as a reparative process while Mr. Mummery believes that when it occurs it is consecutive to injury or irritation.



After a discussion in which the President, Mr. F. Newland-Pedley, Mr. H. Baldwin, Mr. A. S. Underwood, Mr. C. S. Tomes, Mr. Charters White, and Mr. W. Hern took part, the next meeting was announced for June 2nd, when Mr. Leonard Matheson will read a paper on "Some Practical Points involved in the Relation of the Upper to the Lower Teeth," and Dr. Silk on "Notes on a Series of 1,000 Nitrous Oxide Administrations recorded Systematically." Casual communications will also be read by Mr. Sydney Spokes on "A Case of Faulty Development of Enamel," and by Mr. Alfred Smith "Notes on a Case of Epulis."

### Odonto-Chirurgical Society of Scotland.

THE annual general meeting of session 1889-90 was held on March 21st, at the Rooms of the Society, 5, Lauriston Lane, Edinburgh, Mr. JOHN A. BIGGS, L.D.S., President, in the chair.

Mr. J. Keith Chisholm, 15, Duke Street, Edinburgh, was balloted for and duly admitted a member of the Society.

The TREASURER (Mr. Mackintosh) handed in his report, which showed an income for the year amounting to £41 18s. 2d., derived from subscriptions, entry money and interest on bank account. This, with a balance of £8 1s. 5½d. from the previous year, and a deposit-receipt of £105, gave a sum total of £154 19s. 7½d. After deducting expenses, including rent of rooms, printing, &c., &c., a balance of £130 3s. 1½d. was left as representing the entire funds of the Society.

Mr. MACLEOD proposed the re-election of the office-bearers for the ensuing year :—Mr. John A. Biggs, President ; Mr. J. Moore Lipscomb and Mr. G. W. Watson, Vice-Presidents ; Mr. James Mackintosh, Treasurer ; Mr. J. Stewart Durward, Curator and Librarian ; Mr. John S. Amooore, Secretary ; Messrs. Campbell and Price, Dr. Williamson and Mr. J. Graham Munro, Councillors.

Mr. MACGREGOR seconded the motion, which was adopted without dissent.

In accordance with the notice given at the December meeting, Mr. MACLEOD proposed the following alteration of the existing laws :—

"The Law, as it at present stands, reads thus :—

"The Society shall consist of Ordinary, Honorary and Corresponding Members.

"The Ordinary Members shall consist of gentlemen practising as Dentists in Great Britain, and of Medical or Surgical Practitioners interested in Dental Surgery.

"The Honorary and Corresponding Members shall consist of gentlemen practising Dentistry in Great Britain, in the Colonies, or in Foreign countries, and of retired Dental Practitioners in Britain, as

well as such Medical or generally Scientific Men as may have distinguished themselves in connection with Dental Surgery.

"The Ordinary Members shall have vested in them the government of the Society, and all cases not otherwise specified shall be decided by them, by a majority of votes, by ballot, if required."

Mr. Macleod moved that it shall in future read :—

"II. ORDINARY, HONORARY, AND CORRESPONDING MEMBERS.

"The Society shall consist of Ordinary, Honorary, and Corresponding Members.

"*a.* Ordinary Members.—Gentlemen shall be eligible for Ordinary Membership who hold the Licentiate in Dental Surgery of any of the Licensing Bodies of Great Britain or Ireland, or a Colonial or Foreign qualification recognised by the General Medical Council, entitling them to practise Dentistry in Great Britain.

"*b.* Honorary Members.—Gentlemen [practising or retired] who hold a qualification recognised by the General Medical Council, or Foreign or Colonial Dentists holding a qualification recognised in their own country, who may have distinguished themselves in the practice of, or in connection with Dentistry, and Medical or Scientific Men who may have distinguished themselves in connection with Dentistry shall be eligible as Honorary Members.

"*c.* Corresponding Members.—Gentlemen resident in the Colonies or Foreign Countries, holding qualifications recognised in their respective countries, shall be eligible as Corresponding Members."

"The Ordinary Members shall have vested in them the government of the Society, and all cases not otherwise specified shall be decided by them, by a majority of votes, by ballot, if required."

Mr. DURWARD seconded the motion.

Mr. WILSON proposed a counter motion, to the effect that the law should remain as it at present stands ; in which he was supported by Mr. BROWNIE.

Some considerable discussion followed, in which Dr. SMITH suggested that it would be well to adopt Mr. Macleod's motion, but that it should not come into force till two years from the present date, which would give ample time for any not possessing the licentiateship or its equivalent to join if they wished to do so.


Dr. WILLIAMSON spoke in favour of Mr. Macleod's motion, as amended by Dr. Smith.

Mr. MACLEOD said that Dr. Smith's suggestion in no way impaired his proposition, it being merely a question of the date at which it should come into force ; and he would therefore have pleasure in adopting it, and asking the President to put it to the meeting in that form.

The motion and counter motion were then successively put to the meeting, when the former was carried by a majority.

## THE EFFECTS OF BAGPIPE PLAYING ON THE TEETH.

Mr. MACLEOD said recently one of the bandsmen of the Cameron Highlanders was having some teeth filled at the Dental Hospital. On overlooking the work being done, he observed a peculiarity in the teeth of the young man under treatment, and, on inquiry, found that the young man was a piper, and that the peculiarity noticed was caused by the mouth-piece of the pipe. Mr. Murray Thomson, the student under whose care the lad was, took two most excellent impressions, and he had now the pleasure of passing round the models obtained from these impressions, which would give a graphic idea of the peculiarity noted—viz., three crescent-shaped apertures between the cutting edges of the six front teeth.

He had examined the teeth of various pipers since then, and all of them presented the same "wearing away," in a greater or lesser degree, varying with the density of the tooth structure and the time engaged in pipe-playing. He found on inquiry that, on the average, it took about four years to make a well-marked impression, but that, once the enamel edge was worn through, the "wearing away" was more rapid. Every one was aware of the way in which the tobacco-pipe wore the teeth of the smoker, but this was not to be wondered at, the baked pipeclay being a hardish and gritty substance; but that a horn mouth-piece should have such an appreciable effect was, he thought, a matter of curious interest. He might mention, however, that the mouth-pieces suffered more than the teeth—the average life of a horn mouth-piece being from twelve to eighteen months, that of a bone or ivory one (a substance seldom used) being about two years. The peculiarity noticed was a crescent-shaped aperture  on the cutting edge of the front teeth in three localities—viz., between the central incisors, and between the lateral and canine on both sides.

Dr. SMITH and Mr. LESLIE FRASER (Inverness) spoke of similar cases.

Mr. DURWARD exhibited a patient who had had the right half of the superior maxilla removed, along with a sarcoma. He had supplied the deficiency with a vulcanite denture, which restored the contour of the face, and also supplied the necessary masticating power.

Mr. BIGGS then read an interesting paper on the treatment of irregularities of the teeth, which was followed by a discussion in which Messrs. BROWNLIE, DALLY, and WATSON took part, and Mr. BIGGS having replied, the meeting came to a close.

The PRESIDENT announced that the next meeting would be Thursday, the 13th November, and wished to all a pleasant summer; and trusted they would come up next session stored with fresh and interesting facts and observations gathered during the long interval.

In the evening the members of the Odonto-Chirurgical Society

dined in the Balmoral Hotel, Dr. Smith in the chair, and Mr. A. A. D. De Lessert acting as croupier. There were thirty-three present.

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### Liverpool Dental Hospital Students' Society.

THE first ordinary meeting of this Society was held on the 19th March, 1890. R. Edwards, Esq. (president), in the chair.

Proceedings opened with President's opening address. After giving a few illustrations of great results following small beginnings; he congratulated the Society on this its first meeting, though it was small in point of numbers and social influence. He urged the necessity of diligence and application if the Society was to realise its highest object as a means of education, and by reference to the biographies of two or three self-made men gave practical illustration of the power of perseverance. He enjoined all students to avail themselves of every opportunity, to exercise the art of public speaking, and thus qualify themselves to take an active part in the management of the British Dental Association, which he hoped they would all join as soon as they had become registered practitioners. In conclusion, he thanked the members for the honour they had done him and assured them that it would be his constant endeavour to do all in his power to further the interests of the Society.

Mr. Mansell showed some abnormal wisdom teeth. Mr. Phillips showed an old book on "Nitrous Oxide," with particulars of several cases. Mr. Fred. Dopson showed a set of teeth made by an amateur with gold and tube teeth rivetted and fixed to the gums with gutta percha.

The PRESIDENT then called upon Mr. Lewis Osborn for his paper on "Anæsthetics in relation to Dental Surgery," which was followed by a long discussion, in which Messrs. Phillips, Roberts, Bates, Mansell, Dunlop, Pidgeon, Hitchon, and Gilmour joined.

The meeting closed with a vote of thanks to the Chairman, who announced the next meeting would be held in October.

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### MINOR NOTICES AND CRITICAL ABSTRACTS.

#### The Primitive Types of Mammalian Molars.

So much light has recently been thrown on the origin and mutual relations of the Mammalia by the labours of the Transatlantic palæontologists, that in the case of the limbs we have long since been able to trace the evolution of the specialised foot of the horse from that of the five-toed *Phenacodus* (see *Nature*, vol. xl. p. 57). Till quite lately, however, we have been unable to follow the mode of

evolution of the more complicated forms of molar teeth from a common generalised type, although Professor Cope, by his description of the so-called "tritubercular" type of molar structure, paved the way for the true history of this line of research.

The common occurrence of this tritubercular type of dentition among the mammals of the Lower Eocene at once suggests that we

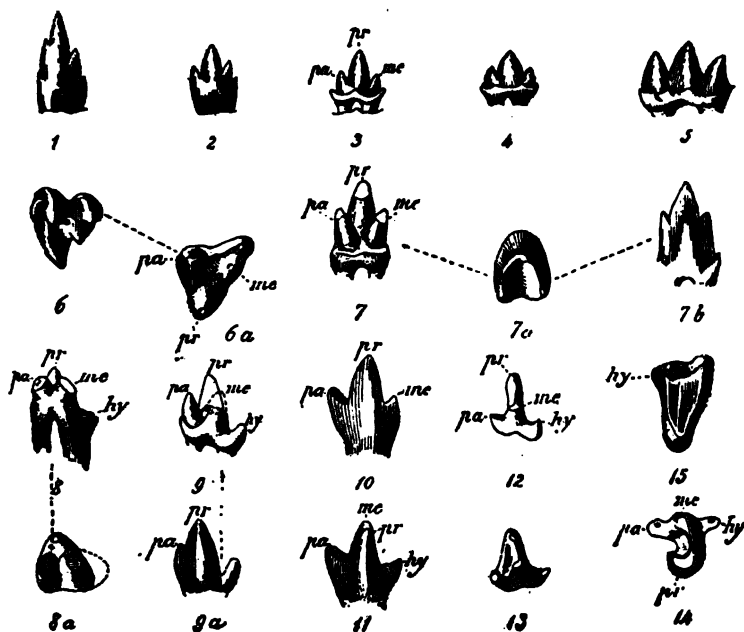


FIG. A.—Types of Molar Teeth of Mesozoic Mammals. 1-5, Triconodont Type (1, *Dromatherium*; 2, *Microconodon*; 3, *Amphilestes*; 4, *Phascolotherium*; 5, *Triconodon*). 6, 7, 10, Tritubercular Type (6, *Peralestes*; 7, *Spalacotherium*; 10, *Asthenodon*). 8-9, 11-15, Tuberculo-Sectorial Type (8, *Amphitherium*; 9, *Peramus*; 11, *Dryolestes*; 12, 13, *Amblotherium*; 14, *Achyrodon*; 15, *Kurtodon*). 6 and 15 are upper, and the remainder lower molars. *pa*, paraconid; *pr*, protoconid; *me*, metaconid; *hy*, hypoconid. In the upper teeth the termination ends in cone.

have to do with a very generalised form of tooth-structure; and by a long series of observations Professor H. F. Osborn, of Princeton, New Jersey, has succeeded, to a great extent, in showing how the more complicated modifications of molars may have been evolved from this generalised type. These observations are of so much importance towards a right understanding of the phylogenetic relationships of the Mammalia that a short summary cannot fail to be interesting to all students of this branch of zoology.

The tritubercular molar (Fig. A, 6), consists of three cusps, cones, or tubercles, arranged in a triangle, and so disposed that those of the upper jaw alternate with those of the lower. Thus, in the upper teeth (Fig. A, 7), there are two cusps on the outer side, and one cusp on the inner side of the crown; while in the lower teeth (Fig. A, 8, 8a) we have one outer and two inner cusps. This type, when attained, appears to have formed a starting-point from which the greater number of the more specialised types have been evolved. The Monotremes, the Edentates, perhaps the Cetaceans, and the extinct group of Multituberculata (*Plagiaulax* and its allies), must, however, be excepted from the groups whose teeth have a tritubercular origin.

It appears probable, indeed, that "trituberculism," as this type of tooth-structure may be conveniently termed, was developed from a simple cone-like tooth during the Mesozoic period, and that in the Jurassic period it had developed into what is termed the primitive sectorial type (Fig. A, 9). The stages of the development of "trituberculism" may, according to Professor Osborn, be characterised as follows:—

(1) The *Haplodont* type.—This is a hypothetical type at present undiscovered, in which the crown of the tooth forms a simple cone, while the root is probably in most cases single, and not differentiated from the crown.

(a) The *Protodont* sub-type.—This sub-type is a slight advance on the preceding, and is represented by the American Triassic genus *Dromatherium*. The crown of the tooth (Fig. A, 1) has one main cone, with fore-and-aft accessory cusps, and the root is grooved.

(2) The *Triconodont* type.—In this Jurassic type the crown (Fig. A, 4, 5) is elongated, with one central cone, and a smaller anterior and posterior cone situated in the same line; the root being differentiated into double fangs. *Triconodon*, of the English Purbeck, is the typical example.

(3) The *Tritubercular* type.—In this modification the crown is triangular (Fig. A, 7), and carries three main cusps or cones, of which the central one is placed internally in the upper teeth (Fig. A, 6), and externally in the lower molars (Fig. A, 7). The teeth of the Jurassic *Spalacotherium* are typical examples. In the first and second types the molars are alike in both the upper and lower jaws; but in the third or tritubercular type, the pattern is the same in the teeth of both jaws, but with the arrangement of the homologous cusps reversed. These features are exhibited in Fig. B.

These three types are regarded as primitive, but in the following sub-types we have additional cusps grafted on to the primitive tritubercular triangle, as it is convenient to term the three original cusps.

(a) *Tuberculo-sectorial* sub-type.—This modification of the tritubercular type is found in the lower molars, like those of *Didelphys*. Typically the primitive tritubercular triangle is elevated, and the three cusps are connected by cross ridges, while a low posterior talon or heel is added (Fig. A, 9). This modification embraces a quinquetubercular form, in which the talon carries an inner and an outer cusp; while by the suppression of one of the primitive cusps we arrive at the quadritubercular tooth, bunodont tooth (Fig. C), like that of the pigs. In the upper molars the primitive triangle in what is termed the secodont series may remain purely tricuspid. But by the

development of intermediate tubercles in both the secodont and bunodont series a quinquetubercular form is reached; while the addition of a postero-internal cusp in the bunodont series gives us the sextubercular molar.

There is no doubt as to the homology of the three primary cusps in the upper and lower molars; and Professor Osborn proposes the following series of terms for all the cusps above mentioned. The first secondary cusps (hypocone and hypoconid), respectively added to the upper and lower molars, are also evidently homologous, and modify the crown from a triangular to a quadrangular form; but there is no homology between the additional secondary cusps of the upper molars termed protocone and metacone with the one termed ectoconid in the lower molars.

Terms applied to the cusps of molars :—

*Upper Molars.*

Antero-internal cusp	...	...	...	=	Protocone	—pr.
Postero- " " or 6th cusp	...	...	...	=	Hypocone	—hy.
Antero-external " "	...	...	...	=	Paracone	—pa.
Postero- " " "	...	...	...	=	Metacone	—me
Anterior intermediate cusp	...	...	...	=	Protoconule*	—ml.
Posterior " " "	...	...	...	=	Metaconule	—pl.

*Lower Molars.*

Anterior-external cusp	...	...	...	=	Protoconid	—prd.
Postero- " " "	...	...	...	=	Hypoconid	—hyd.
Antero-internal or 5th cusp	...	...	...	=	Paraconid	—pad.
Intermediate, or antero-internal cusp (in quadritubercular molars)	...	...	...	=	Metaconid	—med.
Postero-internal cusp	...	...	...	=	Entoconid	—end.

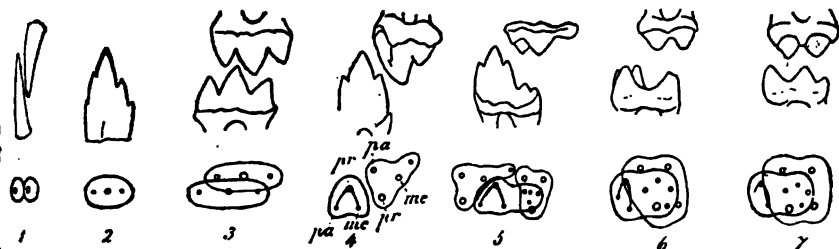


FIG. B.—Upper and Lower Molars in mutual apposition. 1, *Delphinus*; 2, *Dromatherium*; 3, *Triconodon*; 4, *Peralestes* and *Spalacotherium*; 5, *Didymictis*; 6, *Mioclenus*; 7, *Hyopsodus*. Letters as in preceding figure.

Having thus worked out the homology and relations of the tooth-cusps, Professor Osborn gives some interesting observations on the principles governing the development of these cusps. It is considered

\* The symbols *ml.* and *pl.* should properly apply respectively to the metaconule and protoconule, but since they bear the opposite signification in Fig. C, they are placed as above.

that, in the earliest Mammalian, or sub-mammalian, type of dentition (Haplodont), the simple cones of the upper and lower jaws interlocked with one another, as in the modern dolphins (Fig. B, 1). The first additions to the primitive protoconid appeared upon its anterior and posterior borders, and the growth of the para- and metaconids involved the necessity of the upper teeth biting on the outer side of the lower (Fig. B, 2), this condition being termed 'anisognathism, in contrast to

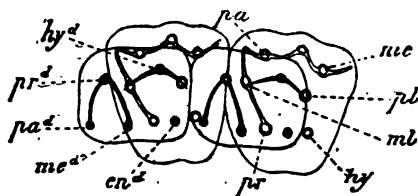


FIG. C.—Diagram of two upper and lower quadritubercular molars, in apposition. The cusps and ridges of the upper molars are in double lines, and those of the lower ones in black. The letters refer to the table given above. The lower molars are looked at from below, as if transparent.

the isognathism of the simple interlocking cones. In the typical tritubercular type (Fig. A, 7) it has been suggested that the para- and metaconids were rotated inwards from the anterior and posterior borders of the triconodont type; but it is quite possible that they may have been originally developed in their present position. By the alternation of the primitive triangle in the upper and lower jaws of the tritubercular type, the retention of an isognathous arrangement is permitted, the upper and lower teeth biting directly against one another.

Finally, Fig. C shows the mutual relations of the upper and lower teeth of the complicated quadritubercular molars, with the positions held by the primitive tritubercular triangles.—*Nature*.

### Polypus of the Gums.

BY ARTHUR W. W. BAKER, M.D., F.R.C.S.I.

SURGEON TO THE DENTAL HOSPITAL OF IRELAND.

THESE small tumours of the gums which constantly come under the notice of dental practitioners, are interesting from the fact that they present some features which resemble those found in some of the more serious tumours of the jaws. In looking up the literature of the subject, I found good descriptions of these growths in Tomes' "Dental Surgery," and Salter's "Dental Surgery and Pathology," also in the works of the German writers, Wedl, Arkövy, and Rothman. As none of the authors I have mentioned give sketches or diagrams of the microscopical appearances of these little tumours, I have illustrated this communication with photographs of my sections. I take this opportunity of acknowledging my indebtedness to Dr. J. Alfred Scott, who kindly photographed Fig. 2 for me, his superior



skill overcoming the difficulties of a thin section lightly stained. For photograph Fig. 1, I am responsible.

The generally received aetiology of these growths appears to be as follows :—A tooth decays until one margin, at least, is level with the gum ; this rugged edge irritates the gum and produces a little tumour or hypertrophy of the gum, which, in a short space of time, fills the carious cavity in the tooth completely.

Now, in my opinion, this cause is not in itself sufficient to account for this growth. For while it is easy to understand how the friction of the tongue over the sharp edge of a tooth may produce an ulceration which, under certain circumstances, may become malignant, there is no such friction in the case of the gum polypus, and I do not think that the mere juxtaposition of a rough edge without friction will account for the growth. I think that it is more likely to be caused by the irritating products of the decayed dentine of the tooth—in other words, by the ptomaines formed by the micrococci and bacilli burrowing in the dentinal tubules, micro-organisms being now looked upon as the chief agents by which the phenomena of dental caries are produced. In support of this view I may mention the opinion of Wedl, who, in his "Pathologie der Zähne," states "that these hypertrophies of the gum are caused by 'die Zersetzungsproducte der harten Zahnsustanzen,' the decomposition products of the hard portions of the tooth." Also in a work published recently, entitled, "Patho-histologie der Zahnpulpa und Wurtzelhaut," Dr. Rothman, of Buda-pesth, attributes the growth of similar polypi from the tooth pulp to the effect of the decomposition products of the dentine being washed over the exposed pulp in addition to the irritating effects of the rough edge of the opening into the pulp chamber.

These gum polypi are generally about the size of a small pea, but may, under suitable circumstances, become as large as a horse-chestnut. They are of the same colour and the same degree of sensitiveness as the surrounding gum, but are much more vascular and softer—that is, bleeding and tearing with the least touch ; they may consist of one or more lobules, and have generally a broad pedicle. In the mouth they are almost indistinguishable in appearance from similar hypertrophies of the pulp, and it is frequently difficult to decide with which you have to deal. I have already pointed out their relationship to carious teeth, and these polypi sometimes attain their greatest size between two teeth whose contiguous surfaces are decayed ; also when the entire crown of a tooth is reduced level with the gum by caries, the roots of a molar may be widely separated by a polypus springing up between them.

I have examined thirty and forty slides from four polypi, and have found that histologically they are essentially papillomata, consisting of branching papillæ covered with squamous epithelium, the latter in some places appearing to be rather in thicker layers than normal, and dipping down between the papillæ in such a manner as to suggest at first sight a possible proliferation of the epithelium downwards into the connective tissue. My observations on this point are at variance with the statements of Tomes and Salter, who both agree in describing the epithelial covering of the growths in question as thin ; however, in support of my observations I may quote the views of Mr. Frederick Eve, expressed

in his Lectures on Cystic Tumours of the Jaws, who states that these cystic tumours are produced by an ingrowth of the epithelium of the gum, following some form of injury, irritation by decayed teeth, or long-continued inflammation which has induced an increased supply of blood to the parts.—*Brit. Med. Journal*, Jan. 6th, 1883.

Now if the irritation of decayed teeth is capable of starting such an ingrowth as Mr. Eve describes—and I think that there is every reason to rely on the accuracy of his observations—is it not extremely probable that where we have a similar cause producing polypus we would be more likely to find an excessive amount of epithelium than that it would be scanty? In fact, this proliferation of the epithelium in some of my sections is so marked as to suggest the possibility that these little tumours may be a connecting link between a papilloma and an epithelioma. However, it is only fair to add that in other sections this proliferation of the epithelium is more apparent than real, and results from the cauliflower arrangement of the branching papillæ. Some of my preparations show masses of connective tissue appearing as if imbedded in the epithelium—this is merely the result of a transverse section going through the tops of the papillæ where they are surrounded by epithelium.

Numerous large capillaries can be seen in the papillæ, which accounts for the troublesome way in which they bleed, and large masses of leucocytes may be noticed in the connective tissue indicating its rapid growth.

Our clinical experience shows that these tumours are absolutely benign, and that when they are removed together with their exciting cause—*i.e.*, the tooth extracted or the carious cavity treated, they do not recur.—*Trans. Roy. Acad. Med. Ireland*.

### A Rare Case of Congenital Form of Ranula.

THE patient when admitted into St. Michael's Hospital, Kingstown, under the care of Dr. Edgar Flinn, presented a peculiar appearance; at first sight he gave one the impression that he was suffering from acute glossitis: his mouth was wide open, and it was with great difficulty he could articulate; the tumour nearly filled the whole cavity of the mouth. The tongue was pushed upwards and far backwards, and could with difficulty be felt with the tip of the finger; the growth also projected beneath the jaw into the mylohyoid space, and assumed an elongated shape. In this situation, being about five to six inches in length, it was hidden from view by the patient's beard, and was as large as a good-sized orange; the projection into the cavity of mouth commenced to cause inconvenience about eight months prior to the date of his admission, and for over a month he had experienced great difficulty in swallowing; he daily essayed to get some solid food down, but it was quite an ordeal to do so, as it required a good deal of manipulation to get the food to the back of the mouth. There was a continual dribbling of saliva, and he was unable to lie down in a recumbent position for fear of suffocation.

On examining the tumour fluctuation was quite evident in the mass in the mouth, but in the neck it partook of a more solid nature. The treatment that suggested itself on his admission was to aspirate

## Polypus of the Gums.

BY ARTHUR W. W. BAKER, M.D., F.R.C.S.I.

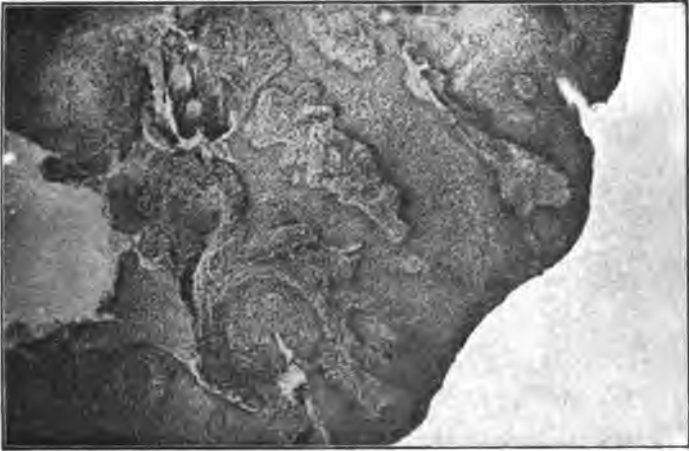


Fig. 1.



Fig. 2.

### EXPLANATION OF PHOTO-MICROGRAPHS.

Fig. 1 shows branching papillæ covered with a thickened layer of squamous epithelium, which shows a tendency to dip down into the connective tissue. Fig. 2 is a transverse section through the tops of branching papillæ; this is taken with a slightly lower power than Fig. 1.



that portion of the mass within the mouth, which was done at once. Nearly fifteen ounces of fluid of a creamy nature was drawn off, and gave him great relief; he could speak more distinctly, but found difficulty in moving his tongue forwards. For a day or so the tumour rapidly filled again in the mouth, and was aspirated a second, and a third time, large quantities of a similar fluid as before were drawn off.

The mass now on the neck became softer, and deep-seated fluctuation could be detected; it was then decided to lay open the tumour from the neck, which was done by a deep incision, and which gave vent to some five ounces of a thick, brown pultaceous matter, offensive in odour. The cavity was scooped carefully out and a drainage tube inserted, and after a day or so there was some supuration and a free discharge of pus.

Subsequently the patient left the hospital freed from the unsightly mass that had disfigured him for so many years.

In this case the patient stated that so long as he could remember he had a swelling about the size of a small Spanish nut lying beneath the tongue, which caused him very little, if any, inconvenience; whilst the parents stated that they had noticed this swelling when their child was but a day or two old; it interfered very little with the movements of the tongue, the infant being able to suck freely and protrude the tongue. At this time it was about the size of a small pea, it remained that size for some years, and continued stationary until some months ago, when it commenced to increase rapidly in size, and interfered with swallowing and movements of the tongue. No assistance or treatment was sought for as the sufferer had a dread of surgical interference, and if it were not for the fact that he went within measurable distance of both starvation and suffocation, he would probably not have given his consent to any ameliorative measures being adopted.

*Remarks.*—In a paper read before the Moscow Medical Society, by Dr. N. Muller on ranula in new-born children, he states that in the foundling hospital at Moscow, four or five cases of congenital ranula had been observed during a period of seven years in about 80,000 children. And the *London Medical Record*, of December, 1877, mentions up to that period there were only two known instances of this affection on record, one published by Dubois in 1833, and a second of a more recent date by M. Lombard. Mr. Bryant records two cases, both probably, he states, congenital. Sir W. Ferguson recorded one case. Fairlie Clark, in his work on the tongue, speaking of the larger tumours that are occasionally, but rarely found lying between the tongue and the lower jaw, says that although the term ranula is applied to them, they are analogous to the sebaceous tumours, which are so frequently met with in the skin, but, to all these growths, whatever may be their exact pathology, the term ranula is given. My case of ranula resembled that class of tumour noticed by Fairlie Clark; it presented some peculiar and interesting features, which were deemed worthy of recording, more especially as the growth was noticed on the second day after birth, and the subject is now nearly twenty-nine years old.

The following case as bearing on the same subject and derived from the same source is also of interest:—

Mr. W. THORNLEY STOKER exhibited the photograph of a girl, aged four, who had a congenital tumour occupying the tongue and

floor of the mouth to such an extent that she could not shut her mouth since her birth. Having cut into it he found it was a cyst, a ranula, filled with a thick fluid of abominable odour. He drained it by a large drainage-tube passed transversely through the floor of the mouth below the tongue, but no sooner was the tube taken out than the sac filled again with pus. At length he drained it from the floor under the tongue, and it healed with ease and rapidity. Owing to the fact that the child had never been able to close the mouth, the molar teeth struck each other, while the upper and lower incisors were an inch distant, the jaw retaining its abnormal position. He proposed to put an elastic apparatus on at night, with a view to raise the front of the jaw by gradual pressure.—*Medical Press*.

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### Diploma Mills.

AN account was recently published in these columns, founded upon reports which had appeared in the American press, of the manner in which the trade of diploma selling is carried on in certain parts of America. From a paragraph in the *New York Medical Record*, it appears another "diploma mill" has been unearthed in the State of Vermont. There is a general law in Vermont providing for the organisation of corporations by voluntary association, for the purpose of establishing and maintaining "scientific, charitable, and benevolent institutions, and such societies as have for their object the promotion of moral, intellectual, and spiritual development." A certain Dr. Dutton and his wife sought to take advantage of this law to organise the "Rutland Medical College." No systematic instruction was given, and he "institution," our contemporary states, "was nothing but a diploma mill, pure and simple." The Judge of the State Court has decided that the so-called college has no authority to confer diplomas, so that this particular bubble is burst. Many others, however, still float. The *Boston Medical and Surgical Journal* states that there is in Buffalo a society calling itself the Druidic Banchoreion, which keeps within the letter of the law by giving certificates that mean nothing to people of education, but to the ignorant pass for medical diplomas. "The existence of such fraudulent institutions among us has," the *Journal* states, "long been known, but only of late has their number, and the wide circulation of their worthless diplomas been comprehended." As has already been announced, the medical colleges in Baltimore have issued a circular to all medical colleges in the United States, suggesting a conference on medical education, to be held in Nashville during the meeting of the American Medical Association next May. The irreducible minimum to be proposed is: 1. A three years' course of six months sessions. 2. Graded curriculum. 3. Written and oral examinations. 4. Preliminary examinations in English. 5. Laboratory instruction in chemistry, histology, and pathology. It may be observed in passing that this circular letter is signed by six medical colleges all possessing the power of conferring medical degrees, and all located in Baltimore. According to a statement in an apologetic article published in the same number of the *Medical Record* as that from which quotation has already been made, "about one-half the 3,500 doctors annually graduated in this country go out from large and well-equipped colleges in New York, Massachusetts, Pennsylvania, and the West. These men

have studied well under good conditions, and deserve recognition as members of a learned profession." Such recognition is readily and cordially accorded in this and every other country in Europe; but foreigners would like to know something more about the other 1,750 who do not "go out from large and well-equipped colleges," and who occasionally favour Europe and Australia with their professional presence.—*British Medical Journal*.

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### Professor Tyndall on the Germ Theory.

If lucid and full exposition is sufficient for instruction, the address lately delivered in the Ulster Hall, Belfast, by Professor Tyndall must have left his audience with a fairly clear idea of the part played by living organisms in disease and putrefaction. The facts connected with this notable discovery of modern times were marshaled by the speaker with great skill and in a descriptive manner which could hardly fail to interest the most casual hearer. The close connexion between Lister's experiments and the conspicuous triumphs of recent surgery were briefly but clearly explained. The important part played by the genius of Koch in disclosing the germ origin of tubercle, splenic fever, and cholera was discussed at some length. An illustrative confirmation of the experiments with tubercle was afforded by quoting the observations by Cornet, which go to prove that the infective media of phthisis consist of germs liberated in the dust of dried sputum, but harmless while imprisoned by it in a moist condition. The climax of interest was reached, however, in those passages of the address which described the life and work of the prime investigator of germ action—Pasteur himself. The recital of the steps by which this most laborious and careful observer proceeded from a general recognition of the principles governing the growth of living organisms to a clear understanding of their specific influence forms in itself a chapter as romantic as it is real in the history of modern science. Remarkable though it is, however, Professor Tyndall had no difficulty in showing that it is excelled alike in interest and in importance by the narrative of those practical deductions, the explanation and application of which have conferred on Pasteur's work its most characteristic feature and its chief glory. Growers of silk, who learned from him the germ origin of *Pebrine*, wine-producers and brewers, to whom he taught the causes of morbid fermentation and its easy remedy, were among the least of those he has aided. For a time he took no directly active share in unlocking the secrets of germ growth in the human body. Later, when animated, perhaps by the example of his German counterpart, Koch, Pasteur bent his energies to this new sphere of his old work, his success, now historical, was even more striking. We need not do more than refer to the remarkable series of experiments which culminated in establishing triumphantly the preventive and curative power of modified inoculation over such intractable scourges as anthrax and rabies. Professor Tyndall did well to acquaint his hearers with some of the details of these researches. He was also particularly happy in closing with a statistical summary of the results obtained by inoculation in rabies, which proves that the mortality from this disease, thanks to the Pasteur method

fell in 1887 from the high average of 70 to that of 3 per cent. Such results, he maintained, assert with a logical force which cannot be resisted the reason and the justice of performing, even though it imply vivisection, such experiments as are needful for their attainment.—*The Lancet*.

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### Chloralamid : A New Hypnotic.

THIS new preparation, introduced by Von Mering, is an addition product derived from chloral anhydride and formamide. It forms colourless crystals, which are soluble in nine parts of water, and in one and a half parts of 96 per cent. alcohol. Its taste is mild, slightly bitter. The effect on the circulation and blood-pressure is very slight, while the comparison of its blood-pressure curve with that of chloral indicates how very little the former is altered compared with the latter. Kny, of Strassburg, has recently tried it in thirty-one cases, the single doses varying from 20 to 60 grains. The cases best suited for its exhibition are those of simple sleeplessness where chloral is of service. In severe delirium it has little effect. It acts well in melancholia, alcoholism, neurasthenia, and in cases of insomnia from bodily ailments—phthisis, heart-disease, &c. It can be given safely in the sleeplessness of old people, but for the relief of pain, as in neuralgia, it is of little use. The hypnotic action of chloralamid is not so powerful as that of chloral hydrate—30 grains of the latter acting as efficiently as 45 of the former. Its effects likewise come on somewhat later, about twenty to forty minutes after administration, on an average half an hour, those of chloral beginning within fifteen minutes. The sleep, however, induced by the new drug is deeper and more refreshing, its duration varying according to the case from six to ten hours. It is very free from after effects, the patient awakening in the morning with a clear head. The general feeling of heaviness with the disagreeable taste in the mouth so common after chloral is absent here. Chloralamid has several other advantages over the older drug. Thus there is no injurious influence on the gastric tract, nor is there any irritative action on the mucous membranes, which is often seen after chloral. It can, therefore, be taken by patients both in powder and in wine without any difficulty. But its most important advantage over chloral is the absence of injurious effects on the circulation. In two cases of valvular disease, doses of 45 to 60 grains were given without any bad result on the heart, while sleep of six to eight hours was produced. Finally, there was an absence of the appearances of congestion and unpleasant after effects on awakening.

It is *superior* to sulphonal, being more soluble, and entirely free from the dangerous prostration and disagreeable after effects so common to sulphonal.—*Therapeu. Monatshefte*.

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### The Auto-Toxicity of Venomous Serpents.

IT seems curious that a question apparently so easy to solve should still be open to further argument. A notion has prevailed that venomous serpents are exempt from the usual consequence of bites in-



flicted by themselves, but on the other hand a number of observations by persons entitled to credence have from time to time been alleged which tend to lead one to infer that snakes are as amenable to the action of this powerful and ill-understood poison as common mortals. The result of some personal observations and experiments by Mr. Waddell on this subject merit attention on account of the care and precision with which they have been carried out, and they really ought to settle the question once and for all. In Mr Waddell's experiments the animals were strong and healthy, and the poison was obtained by inducing them to bite a dried palm leaf, which concealed a shell to catch the virus. Beginning with the deadly cobra, he found that the animal did not experience the slightest visible inconvenience when a cubic centimetre of the diluted poison was injected subcutaneously, while fowls treated in the same manner died in half an hour. As between serpents belonging to the same venomous category, he found that in most cases an immunity existed, though to this rule there were exceptions. The results were, however, invariably fatal to non-venomous serpents, and to batrachia. This immunity of certain serpents to their own poison and that of nearly allied species is by no means easy to explain, and Mr. Waddell is reduced to the hypothesis of an established tolerance brought about by the absorption in small quantities of the poison contained in the sac and swallowed with the saliva. The author even goes a step further and explains the immunity possessed by snake-charmers to the effects of systematic ingestion of small quantities of the poison.—*The Medical Press*.

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## OBITUARY.

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### Mr. James Nasmyth.

ON May 7th died James Nasmyth, the celebrated engineer. It was he first suggested to science the principle of transmitting rotatory motion along a coil, and seeing that the practical outcome, as far as we are concerned, has been the burring engine, we cannot fail to pay our tribute to his memory.

James Nasmyth was born in Edinburgh on August 19, 1808, and he was consequently in his eighty-second year at the time of his death. He gave very early evidence of a decided taste of mechanical pursuits, and this taste was increased by intimacy with the son of an iron-founder, whose works young Nasmyth was never tired of visiting. From a very early time he had learnt by constant practice the art which has been found most valuable to great engineers—the power of handling tools of all kinds himself. All the various processes of practical mechanics were familiar to him, and when he reached a sufficient age to attend classes at Edinburgh University he was able to

pay his own fees from the sale of models of steam engines and other mechanical contrivances which he had constructed under his father's roof.

In the year 1829, when Nasmyth had just completed his twenty-first year, he came to London and offered his services to Mr. Maudslay, with whom he remained for two years, and in 1831, on Mr. Maudslay's death, he returned for a short time to Edinburgh, where he spent his time and skill in constructing a set of engineering tools. With these tools and a very small capital, he established himself in business in Manchester. Here he soon found the work that poured in upon him too much for his small premises, and he secured a large plot of ground at Patricroft, near Manchester. This site of twelve acres was soon covered by a vast series of workshops, which he called the Bridgewater Foundry. Here he invented and perfected a large number of mechanical tools which are used in workshops all over the world. The most famous of them all is the steam-hammer which has done more than anything else to make his name known among those who know but little of engineering. Indeed, the steam-hammer is used almost proverbially for a force, to the combined strength and delicacy of which no limits can be set. This was invented in 1839, only five years after Nasmyth had started business in Manchester, and since that time it has had an increasing influence in mechanical arts, especially in the driving of piles used in the foundations of bridges and dock works. The first idea of the hammer occurred to its inventor when he was asked by the Great Western Railway Company to construct a wrought iron intermediate paddle-shaft for a proposed ship called the Great Britain. Other firms had declined to undertake the construction of a shaft with a size and diameter never before attempted. The paddle-shaft was never forged, as the screw was invented about this time. But meanwhile Nasmyth had invented a means of raising an enormous block of iron to a sufficient height and of regulating and directing its descent upon the anvil below.

Among the other inventions perfected by Nasmyth at Bridgewater Foundry may be mentioned his safety founding ladle, the double-faced wedge sluice-valve, a reversible rolling-mill, a form of steam-engine derived from that of his steam-hammer and now almost universally adopted for screw steamships, and a spherical seated safety-valve. In 1857, at the age of forty-eight, Mr. Nasmyth retired from the business, which for some years had

been carried on by the firm of Nasmyth, Gaskell & Co., and from that time he resided at Penshurst, where his principal pursuit was astronomy. He was the author of "Remarks on Tools and Machinery" in Baker's "Elements of Mechanism," 1858, and "The Moon considered as a Planet, a World, and a Satellite," which latter work was written in conjunction with James Carpenter. A very interesting autobiography by Mr. Nasmyth, edited by Dr. Smiles, was published in 1883.

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Alfred Hill, L.D.S.Eng.

It is with very sincere regret that we have to record the death of an old and honoured member of the dental profession—Mr. Alfred Hill, of Henrietta Street, Cavendish Square, which took place at his suburban residence at Ealing, on the 18th ult. Until within a week of his decease he appeared in good health, and was journeying daily to town to attend to his professional duties. Symptoms, however, of a serious nature suddenly manifested themselves indicating intestinal obstruction, and after much suffering he succumbed in spite of the most careful nursing and the employment of the highest medical and surgical skill.

Mr. Hill was only in his sixty-third year, but had been in practice for over forty years, so that he was still a young man when the first symptoms of the great dental reform movement began to assert themselves. Endowed with marvellous energy, indomitable industry, a keen intelligence, and a loyal feeling for his profession, he at once threw himself heart and soul into the great struggle, placing his talents freely at the disposal of the leaders of the movement. Looking back, therefore, we find him occupying an official position in the College of Dentists; and shortly after the members of the profession assembled at that celebrated meeting held in the Freemasons' Tavern in October, 1856, he was elected to fill a position for which he was eminently suited, viz., to act in conjunction with Mr. Rymer as hon. secretary to that transient institution. Here he worked strenuously until the ultimate amalgamation of the College of Dentists with the Odontological Society. Eventually the Dental Hospital of London sprang into existence, and Mr. Hill took an active part in furthering the work of that Institution by accepting the onerous duty of acting as hon. secretary, both to its Medical and Managing Committees.

When in 1864, the increased appreciation of the Hospital by the public, rendered it necessary to increase the staff, Mr. Hill was chosen to act as assistant Dental Surgeon and soon became deservedly popular as a teacher and officer. In due course he was elected on the senior staff from which position he eventually retired, but not until he had completed the twenty-fifth year of his connection with the Institution in the foundation of which he had taken so active a part.

In 1877 the profession welcomed the publication of Mr. Hill's work entitled "The History of the Reform Movement of the Dental Profession in Great Britain," a treatise of infinite value, and written in a most comprehensive and impartial spirit. It was at once recognised by those who, with the author, had borne the brunt of the early struggle for progress and educational advancement, as a just and authentic record of what had occurred, and is now a standard work of reference.

Amongst the many gifts possessed by Mr. Hill we may mention his talent with the brush. He was a clever artist, and was never happier than when seated at his easel. Never idle, he also published several books on religious subjects, which had considerable circulation. In his profession he gained for himself an honoured and respected name, and his genial disposition endeared him to all those who enjoyed the pleasure of his intimate friendship.

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W. R. Wood, L.D.S.Irel.

WITH deep regret we have to record the death of Colonel William Robert Wood, which occurred at his residence, 53, Norfolk Square, Brighton, on Wednesday, April 30th. Colonel Wood was born eight and forty years ago in London. His father, Mr. John Wood, was a Brighton man, and for many years he practised there as a dental surgeon. He died, however, when his sons were young children, and thus it was that Colonel Wood came to be articled to his uncle, Mr. Councillor William Robert Wood, of Carlisle House, Pavilion Buildings. In due time he commenced practice for himself; He was elected in 1878 a Licentiate Dental Surgeon of the Royal College of Surgeons, Ireland; at a later period he was appointed Consulting Dental Surgeon to the Brighton Dental Hospital; and he acted also as honorary dentist to the Homœopathic Dispensary. Colonel Wood may be re-

garded as essentially a public man; and by his useful and indefatigable labours in connection with the Brighton Artillery Volunteers he will be chiefly remembered. The one prominent movement which more than any other perhaps is associated with the period during which he was in command consisted in the formation of the Light Field or Position Battery, which he had the satisfaction of seeing do excellent service at Sheffield Park last July. Always deeply interested in sailing and rowing, Colonel Wood gave a practical proof of his sincerity in this branch of sport by becoming one of the most ardent promoters of the Brighton Sailing Club, an active member of which he remained until the time of his death. About the year 1876, he succeeded Mr. H. N. Jenner as secretary to the local branch of the Life-Boat Institution, and so useful was the assistance he rendered when, in connection with the Fisheries Exhibition at South Kensington, a life-boat competition took place off Brighton, that he was presented with a handsome pair of binocular glasses. Colonel Wood, in addition to the other offices, was a Mason. He was a Past Master of the St. Cecilia Lodge, and a P.Z. of the Royal Pavilion Chapter.

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#### George Parkinson, L.D.S.Eng., of Bath.

It is with great regret we have to announce the death of Mr. George Parkinson, late of Princes Buildings, Bath, which occurred on Monday, the 28th ult., at his residence at Hampstead, in which locality he had selected to spend the remainder of his life and enjoy his well-earned leisure; but unhappily he was three months ago overtaken by a painful malady, to which he finally succumbed. He commenced his professional career in the old establishment of the family in Racquet Court, Fleet Street, where his grandfather, father and brother practised for the greater part of a century. On the death of a cousin in 1848 he succeeded to an old family practice in Bath, where he resided for over forty years, and where he was highly respected. In 1881 he was elected President of the West of England Branch of the British Dental Association. Mr. Parkinson was the second son of Mr. George Heath Parkinson, formerly of Racquet Court, Fleet Street, and younger brother of Mr. James Parkinson. He was born in the year 1817, and had just entered his seventy-fourth year. Mr. Parkinson's name is associated with dental surgery

perhaps for a longer period than any other in the profession. Mr. George Parkinson was on the Council of the Odontological Society in 1861-3 and Vice-president in 1870-1.

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### Dr. Julius Pollock.

WE learn with great regret just previous to going to press the death of Dr. Julius Pollock, which occurred on Sunday, May 11th, after a short illness from pleuro-pneumonia. His death cannot but fail to be a great loss to the hospital and medical school of Charing Cross, where for several years he held the position of dean, senior physician and lecturer on medicine.

His familiar face and sympathetic speeches will also be missed by the members of the Dental Hospital, at whose gatherings he scarcely, if ever, failed to be present, and for whom he had so great a regard. The funeral took place at Kensal Green Cemetery on Wednesday, May 14th. We regret that it is impossible so near the date of publication to give a more detailed account of Dr. Pollock's career.

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### C. H. Bromley, MR.C.S., L.D.S.

ON Sunday, the 4th of May, at 1, Portland Terrace, Southampton, Charles Henry Bromley, M.R.C.S., L.D.S., Eng., honorary dental surgeon to the Royal South Hants Infirmary, aged fifty-one.

Mr. Bromley was a member of the British Dental Association and of the Southern Counties Branch, and his early decease will cause universal regret among all who knew him.

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## MICROSCOPICAL AND LABORATORY GOSSIP.

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THE following correspondents have sent us answers to queries of last month :—

(1) The most satisfactory method, in my opinion, of preparing sections showing odontoblasts *in situ*, is as follows :—The jaw, preferably the lower, of an embryonic mammal, such as kitten or

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pup, taken while still in a fresh condition, is carefully stripped of all the tissues covering it, except the oral epithelium and flange of gum, and is placed in the usual standardized solution of Müller's fluid, in order to harden its soft structures, the volume of fluid being about twenty or thirty times the bulk of the immersed tissue. The fluid must be changed every day for four or five days, and then every third or fourth day. The hardening process is to be completed by removing the specimen—which has remained in the Müller's for a fortnight—to alcohol or rectified spirit; and this is to be renewed occasionally until all the colouring matter has disappeared from the specimen and fluid. Vertical sections are then cut by means of a thin, sharp knife, and these placed longitudinally on the stage of a Cathcart or Williams' freezing microtome, and cut in the ordinary way. Best results are obtained from sections in the canine and bicuspid regions, as here the parts are less likely to be disturbed in the manipulations with the microtome. Imbedding in paraffin and wax, or celluloidin, is of little service. The advantages claimed for this method are:—(a) The simplicity of its performance. It will be seen that the hard tissues are not softened by any decalcifying agent, which would materially affect the delicate soft tissues. The knife cuts quite easily the thin cap of semi-calcified dentine and bone, and the elements of the pulp are in no way disturbed in their relation to each other. (β) The odontoblasts are of large size and easily observable at this period, as their formation of dentinal fibrils is at its highest stage of development. They can be isolated, if thought necessary, by separating with the point of a needle from the surface of the dentine papilla the cap of dentine to which in places they adhere. (γ) This method affects little, if at all, the relative positions of dentine, odontoblasts and pulp; and I have found it to be extremely successful.

(2) I should advise your correspondent not to grind down sections of teeth of fishes *in situ*; but to decalcify the jaw and teeth with a 5 per cent. solution of chromic acid, or 10 per cent. solution of HCl. After sections have been cut and stained they should be washed well in distilled water, dehydrated for three minutes in absolute alcohol, "cleared" in oil of cloves or xanthol, and mounted in Canada balsam. Carmine is the best stain for fishes' teeth. If it is used, however, it is necessary before transferring to distilled water to pass the section quickly through weak  $\text{HC}_2\text{H}_3\text{O}_2$ , as this "fixes" the stain. If gold-

chloride is used the specimens must be mounted in glycerine-jelly.

(3) In finishing slides the lines are best drawn on a revolving "turn-table," the cement being applied round the edge of the cover-glass with a No. 1 "Rigger" camel-hair brush. In this way slides can be neatly and effectively finished. "Turn-tables" can be purchased at Baker's or Watson's or other opticians. All cements sold at shops are more or less good; but the most durable is gold size, laid on thickly and then covered with black or white colour from an artist's oil tube. White becomes dirty after a time; black is always serviceable. It is necessary to wring the slides six or seven times, and the cement at first should be thickly applied, as otherwise it runs under the cover-glass and spoils the look of the specimen.

(4) Logwood, gold chloride, osmic acid and the darker stains are of the greatest use; but any stain is applicable for specimens to be photographed.

(5) It is unnecessary to cut sections of enamel to demonstrate the prisms. After having softened enamel by immersion in 10 per cent. solution of  $\text{HCl}$ , remove by means of a needle-point or fine brush a small portion to a slide; put a drop of normal salt solution on to the top of the enamel, and press down cover-glass. Then run a solution of carmine or orange-rubine beneath the cover-glass, and draw off the excess with a little blotting-paper. Wash the stain away further by irrigation with weak  $\text{HCl}$ , or  $\text{HC}_2\text{H}_3\text{O}_2$ , and mount in this solution or acidified glycerine after Beale's plan. Ring round with cement and finish on the "turn-table."

W. A. HOPEWELL-SMITH.

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DOUBLE STAINING.—Stain 1, Carmine: Place one drachm carmine in a mortar, pour over it two drachms of a strong ammonia solution; let it stand for twenty-four hours. Take four ounces of a saturated solution of borax in distilled water; with this mix the carmine and ammonia in the mortar, rubbing well together; filter and keep in a stoppered bottle. Stain 2, Sulph-Indigotate of Soda: Make a saturated solution of above in distilled water. Keep in a stoppered bottle.

The sections cut with a Cathcart's ether microtome, or otherwise, are now prepared for staining in the following way:—



Wash in 1 per cent. solution of bicarbonate of soda for a few minutes, then in water; transfer to a little of the carmine stain for a few minutes, wash in methylated spirits, then in a solution of methylated spirit five parts and hydrochloric acid one part for a few minutes, again in spirits for a little time to get rid of all the acid.

The stained sections are now transferred to a blue stain as follows:—Four ounces spirits methylated and eight or ten drops of the sulph-indigotate of soda solution, made up fresh just before using, left in this for from four to twelve hours, cleared in oil of cloves and mounted in balsam. The above method is from Cole.

J. ANDREW, L.D.S.Eng. (Belfast).

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WE are delighted to notice that at the fourth annual exhibition of the Ulster Amateur Photographic Society the silver medal awarded for landscapes under half plate (set of six) fell to an old student of the Dental Hospital, Mr. J. J. Andrew, of Belfast.

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## ANNOTATIONS.

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THE ANNUAL MEETING.—We have received the following particulars of the proceedings of the Annual Meeting for publication, but they must be considered as preliminary in detail and may be obliged to be modified. On Wednesday evening, August 20th, the Right Worshipful the Mayor of Exeter will invite the Association to a reception by way of welcome to the city. On Thursday morning the business meeting of the Association will be held in the Art Gallery of the Albert Memorial Museum, to be followed by the reading and discussion of papers. In the building members will find a room at their disposal for writing letters, telegrams, &c., which can be posted there. The room is proposed to be supplied with the daily papers for the use of members. In the evening the Reception Committee propose to invite the Association and its friends to a reception, for which the whole of the building will be available. There is to be a vocal and instrumental concert in one room, and in another the string band of the Royal Marines from Plymouth will execute a programme of

music, and at the conclusion of the vocal and instrumental concert, will perform in the Art Gallery, which will be available for dancing. Refreshments will be served in the library.

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ON Friday, August 22nd, the meeting of the Benevolent Fund will be held, and reading and discussion of papers will be continued. In the evening the Annual Dinner of the Association will take place at the Rougemont Hotel. On Saturday, the 23rd, demonstrations and clinics will be given in a ward of the Devon and Exeter Hospital, kindly placed at the disposal of the Association by the Committee of the institution, the Dental Hospital of Exeter not providing sufficient accommodation for the purpose. After the demonstrations arrangements will be made for visiting objects of interest in the city, and in the afternoon the President-elect and Mrs. Browne-Mason will entertain the Association and friends at an "At Home" in the Victoria Hall.

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AMONGST the attractions for members and lady friends will be found the August exhibition of the Devon and Exeter Botanical and Horticultural Society, which takes place on Friday, the 22nd, in the picturesque grounds of Northernhay, and in such a favoured county as Devon is always a magnificent Floral Fête. The headquarters of the Association will be at the Rougemont Hotel, the courteous manager of which proposes to make a special tariff for members staying there, and to place at the exclusive disposal of members the handsome supper room of the Hotel Assembly Rooms as a room for smoking and intercourse.

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FOR members proposing to take a holiday in the West, Exeter provides a very good starting-point for excursions into Dartmoor, the Highlands of the West, and Exmoor with its stag hunting, the quarry being the red deer which roam wild amongst its valleys and hills; whilst for those who desire rest and change, the coast is dotted with charmingly situated towns and villages, from queenly Torquay to romantic Lynton and Lynmouth.

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AT another page we print the latest, and we hope the last stage of the litigation that has long been familiar to our readers under the name of "The Partridge Case." The issues involved

have been too frequently touched upon in these pages to need recapitulation ; it is sufficient to say that the appellant relied upon proving malice on the part of the Medical Council in regard to the non-reinstatement of his name on the Dentists' Register during the period which elapsed between the mandamus which ordered the restoration of the name to the Register and the withdrawal of the name after due inquiry on the part of the Medical Council. The Lords of Appeal dismissed the case, and we think that, whatever mistakes the Medical Council may be accused of, no fair-minded critic would attempt to impute malice to that much-abused body.

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WE are very pleased to learn, from the advertisement which appears in our present number, as well as from other authoritative sources, that the spirit of progress is strong among the authorities at the Dental Hospital of London, and we cannot but hope that the ungrudging expenditure of money, and what is much more valuable, time and energy, on behalf of the students, will result in schemes of teaching which need acknowledge no superior in the Kingdom. The May entry of students has been fourteen—a slight improvement on last year. Demonstrations of micro-photography will accompany the summer lectures, Mr. Bennett having, we believe, already commenced this excellent innovation. Mr. Andrew Pringle, whose name is a guarantee for as near an approach to perfection in this department as possible, has kindly promised to expound the mysteries of the microscope and micro-photography to Mr. Underwood's anatomy class, so that nothing has been left undone in this direction. In another department, which, in the past, has been open to (and has received) a good deal of criticism—we mean the workroom—great strides are being made. A workroom is being fitted up with electric light to each bench, so that work may be carried on during the foggy weather. We also notice that in furtherance of the scheme for making artificial dentures, an advertisement appears in this number of the Journal for a mechanical assistant. The post is a good one, and we have no doubt a good man will be forthcoming. Altogether, it is evident that no effort is to be spared to render the teaching complete and thorough in all departments.

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ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At the April sittings of the Examiners, the following gentlemen passed the First Professional Dental Examination :—John Charles Holland, Huddersfield ; Henry Alexander Matheson, Edinburgh ; Robert Nasmyth Hannah, Edinburgh ; Murray Thomson, Edinburgh ; David Wilson, Edinburgh ; and Joseph Douglas Stewart Shepherd, Edinburgh ; and the following gentlemen passed the Final Professional Examination and were admitted Licentiates in Dental Surgery :—John William Daniels, Tyldesley, near Manchester ; John Wesley Lloyd, Liverpool ; and Alexander Wilson, Glasgow.

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EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.—The first student of this school has just passed with special credit the final examinations for the Scottish triple qualification, and is now entitled to place her name upon the medical register. It is of additional interest that this student, Miss Annie Jagannadham, is also the first Hindu lady who has ever completed her medical studies in this country, or who has ever registered as a medical practitioner in Great Britain. Miss Jagannadham studied for three years in Madras, and has subsequently spent two more years in the Surgeon Square School, where for the last year she acted as demonstrator of anatomy.

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FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The following passed the first dental examination at the April sittings of the Board of Examiners :—David P. Boyd, Glasgow ; Alexander Naismith, Glasgow ; Thomas D. Nicol, Glasgow ; Arthur Sutcliffe, Manningham, Bradford. The following passed the final examination and were admitted Licentiates in Dental Surgery :—Albert E. Anderson, D.D.S., Maidstone ; James Duncan, Glasgow ; John Head, Millgate Facit, Rochdale ; Charles Hilton, Brighton ; Ernest S. S. Marshall, London ; Eli Wright, Birmingham.

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ROYAL COLLEGE OF SURGEONS IN IRELAND, DENTAL EXAMINATIONS.—The following gentlemen, having passed the necessary examination, have been admitted Licentiates in Dental Surgery of the College :—Mr. S. A. Coxon (Wisbech), Mr. A. L. Harrington (Rochford), Mr. H. Hudson (Birmingham), Mr. T.

Nottingham (Hull), and Mr. G. A. Story (Canterbury). The next examination will be held on Monday, July 21st.

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WE learn from a contemporary (*Age*) that the Dental Board of Victoria having concluded the second year of its existence, has forwarded a report to the Chief Secretary, showing that during the year just passed thirteen persons have been registered as dentists, and twenty-nine certificates of registration have been issued. Regulations relating to the examination of persons desiring to obtain certificates of fitness to practise dental surgery were approved of by the Governor in Council on the 7th May, 1889, and the board at the earliest possible date held a "modified examination" under No. 5 of these regulations, at which three candidates presented themselves, two of whom were successful in passing the required standard. The formation of a Dental Association in Melbourne to co-operate with the board in carrying out the system of dental education now in force is alluded to with pleasure, as is also the fact that the operation of the Act of Parliament under which they work has been entirely satisfactory.

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ALL loyal members of the British Dental Association will be pleased to learn that the Council of the Dental Association of Victoria have unanimously elected our present President, Mr. S. Lee Rymer, an honorary member of their Association. This courtesy is a pleasing evidence of the recognition by our colonial brethren of the importance of the British Dental Association.

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ON Tuesday, the 22nd of April, at the residence of Mr. C. V. Cotterell, a presentation took place of a massive silver inkstand bearing the following inscription: "Presented to Felix Weiss, Esq., as a token of esteem and regard by past and present pupils on his being elected President of the Odontological Society, 1890."

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WE are happy to learn that Sir Richard Owen's condition continues to improve.

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AT the last meeting of the Council of the Royal College of Surgeons of England, the offer, made by Miss Lawrence, of a collection of interesting manuscript documents, the property of her father, the late Sir William Lawrence, was accepted.

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## STUDENTS' SOCIETY OF THE NATIONAL DENTAL HOSPITAL—

The last ordinary meeting of this Society was held on Wednesday, April 2nd, at 8 p.m., P. W. Grutham, Esq., President, in the chair. The minutes of the previous meeting were read by the Secretary and confirmed. Miss Brierly was elected a member of the Society. Casual Communications: Mr. E. G. Carter showed a case of erosion in a right upper canine. Mr. Allnutt mentioned a case of hæmorrhage following extraction. The bleeding ceased within half an hour after the removal of the tooth, coming on again profusely five days afterwards. Mr. Spokes mentioned the case of a family, all of whom had teeth of a dark brown colour; this peculiarity was also demonstrated in the teeth of the grandparents and great-grandparents. The gentleman who was to have read a paper was at the last moment prevented from doing so, and no other being forthcoming the meeting adjourned to the second Friday in May, when William Hill, M.D., B.Sc. London, will read a paper, the subject of which will be duly announced.

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SINGULAR GIFT TO KIRKINTILLOCH.—Under the above heading a contemporary announces as follows the particulars of a somewhat singular bequest. It strikes us as somewhat strange that the police commissioners should have been selected to administer the funds. "At a meeting of the Kirkintilloch Police Commissioners it was reported that Mr. William Watson Mackay, Isabella Villa, Dunoon, had resolved to settle £1000 upon the Commissioners. The interest of £500 is to go to give gratuitous dental surgical aid to any applicant—Mr. Mackay having been in the habit of extracting teeth free; and of remaining £500 to establish courses of popular lectures. It was unanimously agreed to cordially accept the gift."

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WE read in a contemporary of another death in which false teeth played a part. A woman residing at Wandsworth was about to put some coal on her kitchen fire, when she dropped on the floor in a fit. The fall loosened the false teeth, eight in number, attached to a vulcanite plate, and they slipped down her throat. She expired soon afterwards. Dr. Dunne stated that he had made a *post-mortem* examination, and found the vulcanite plate and teeth in the gullet, obstructing the entrance to the glottis. The jury returned a verdict of accidental death.

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THE French Minister of Marine has absolutely prohibited the medical officers of the navy from practising hypnotism "under any pretext whatever."

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

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### The Annual General Meeting.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—As I am deputed, with the help of a small sub-committee, to organize a branch of microscopic work which shall be of interest to the members at the coming Annual Meeting of our Association to be held next August at Exeter, I shall be glad to receive the names of any gentlemen who are willing to exhibit interesting specimens or to demonstrate any methods of section cutting or mounting, &c. There will be twenty-five instruments, with lamps, &c., complete, and a skilled attendant in charge.

I am not prepared to receive any specimen for exhibition that does not bear the name and address of the sender attached to each.

Faithfully yours,

W. A. HUNT.

Pen Villa, Yeovil,  
May 8th, 1890.

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### Anglo-American Quackery.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Mr. R. F. H. King, President of the Central Counties Branch, has struck a note, unhappily of *discord*, but one with which I myself am entirely in *concord*. With the respectable, properly qualified and skilled American dentist, he has no bone to pick, nor have I. It is the advertising charlatan who is the real foe of the respectable English non-advertising practitioner. Easy-going men, who don't care a hang so long as their own immediate interests are not imperilled, let it go on—but some day this question will *compel* the attention of the members of the British Dental Association. For what do we see? The English, Scotch, and Irish diplomatist, with his hands tied and his mouth gagged—*most* respectably tied and most praiseworthy gagged—but tied and gagged for all that: and the loud-voiced, vulgar and ignorant Anglo-American *quack dentist*, having it all his own way. There he sits in his room, blessing the Act, which gives to such as he the exclusive right of advertising as a qualified practitioner. Does he stop at this? Not a bit. Utterly regardless of Dentists Acts, or British

Dental Association he floods the cities and towns he means to conquer with pamphlets, setting forth, not only his own merits and the merits of Anglo-American Dentistry generally, but he boldly says that the qualified English dentist is an utter duffer—ignorant, uneducated, and wholly unfit to be named in the same breath with the holder of an American diploma, whether purchased or honestly obtained.

Now, Sir, it would seem to be *rather* an injustice to allow such men to reap the harvest, and to give to the reputable English practitioner only the gleanings; and yet, such is the distinct tendency of all this outcome of Dental Legislation and Dental Ethics.

It is the fashion of the day to seek for American skill—and when this goes forth to the world in the shape of advertisements in every paper one takes up—whilst the English practitioner of respectability silently allows him of the Quack American School to have it all his own way, the result must surely be obvious, viz., that we are simply playing into the hands of all such men by giving to *them* the advertiser's monopoly.

Even the mechanical shilling-a-tooth advertising quack dentist, must sooner or later bite the dust before the Hydra-headed Anglo-American dragon!

The evil will be felt more and more by the high-minded and well educated young men who are now joining the ranks of the *English* dentist of respectability, the students of our hospitals. The disease must be first understood, then attacked, and by-and-bye it may be *conquered*. It is folly to let it spread over the land without an effort at cure. It is a kind of flood that should be dammed—in every sense—thoroughly: or the certain effect of all this will be to cause the average English dentist to go to the wall, whilst his advertising Anglo-American opponents fill teeth and pockets galore. The remedy, I confess, I am not prepared to give, but the first step is to acknowledge that the disease should be *attacked* and not *ignored*.

E. M. TOD.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.



Members are reminded that their Subscriptions to the British Dental Association became due on January 1st and are requested to forward the same to F. CANTON, Hon. Treasurer, 40, Leicester Square, London, W.C.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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The Medical Council.

WHEN the conjoint scheme was put into operation, and the College of Surgeons ceased to grant its membership save in conjunction with the licentiatehip of the College of Physicians, it was felt that the additional requirements and the additional expense might have the effect of deterring some who would otherwise have taken the membership as well as the license in Dental Surgery, and this anticipation has perhaps been to some extent fulfilled. For although the absolute number of students who have taken, or are on their way towards taking, the conjoint diplomas is larger than at any previous time, yet this increase seems hardly to have kept pace with the increase in the entries—at least at the Dental Hospital of London; nevertheless there may easily be causes at work in producing this effect other than the simple one here

suggested, so that too much stress must not be laid upon this fact.

To judge by the motion brought before the Medical Council by Mr. Macnamara, the representative of the Irish College of Surgeons, it would appear that the adoption of the conjoint scheme had operated more strongly in that country in the direction already alluded to, for he asks that "with the object of raising the status of registered dentists, facilities should be afforded them of obtaining such additional titles after sufficient examination." His proposition put shortly seems to be this: that although they would confer no right to practise or to register upon the general Medical Register, degrees comparable to, or identical with, the old membership of the several Colleges of Surgeons should be revived, and granted to dentists as additional qualifications, or as he puts it, as "a feather in their caps;" and he succeeded in carrying a resolution pledging the Council to the desirability of such a step. We must confess that we entirely fail to see the practical utility of the step proposed. It has been found that there are not many—in London schools at all events—who now are deterred from taking the conjoint diplomas even as things stand, and there surely would be but a very small number who, having fulfilled the requirements of the proposed membership, would be content to stop short of a full registrable medical qualification.

Let us consider it from the "feather-in-the-cap" point of view. If it is not made easier to get, if "facilities" are not offered, then who would care to take it instead of the full conjoint diploma? On the other hand if it is made easier, what will its status be? It will no longer be the examination identical with that passed by the general medical practitioner, the value of which to the dentist lies almost wholly in the fact that it is proof that his attainments as a

student were equal to those of his contemporaries at his medical school ; it will be a special something, of a status to be hereafter determined, but necessarily below that of the conjoint diploma.

And inasmuch as it will not qualify for admission to the Medical Register, and the Medical Council have their hands more than full in visiting the qualifying examinations, it is exceedingly unlikely that they would undertake to visit these special examinations, so that there would be no guarantee whatever that the different bodies which might see fit to offer the " facilities " would adopt a high or a uniform standard.

To what then are we to look for the estimate in which it would be held ? Not to the numbers who would take it, for it would never be sought by a number sufficient to give it a stamp through the abilities and position of the dentists who held it ; not to the estimate in which the old degree of the College was held, seeing that it must differ in important particulars from that ; and still less to the recognition to be accorded to it by the medical profession, who would be sure to look upon it as a sort of cheap simulation of full medical qualification.

It may, however, be argued that the dentist, as such, has no close relation with the more purely medical side of practice, and that he has, therefore, no sort of need of a medical degree such as the licence of the College of Physicians, which involves in England an additional cost of fifteen guineas. On the score of economy, therefore, the proposal has something to recommend it which cannot be gainsaid, and it is probable that a College of Surgeons, in granting its own membership, might not deem it necessary to carry its examination in medicine and midwifery to the extent to which it is carried under the conjoint scheme, so that in this respect the candidate's labours might legitimately be lightened.

Notwithstanding this, and conceding for the sake of argument, the possibility of a surgical degree which confers no right to registration standing in the same position that the College of Surgeons' membership occupied at a time when it did confer such rights—a possibility which we do not see our way to conceding—there remains still an objection which to our mind would prove fatal; namely, that no one in a position to secure the full title to registration and recognition as a fully qualified medical practitioner would remain content without it, and this under the Medical Act of 1886, the proposed "membership" would not enable him to secure.

That which the ambitious dental student seeks is full equality with his medical *confrère*; anything short of this does not appear to us worth the additional time and labour and expense incidental to securing it.

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## ASSOCIATION INTELLIGENCE.

### The Annual General Meeting.

THE Annual General Meeting of the Association will be held in the Art Gallery of the Albert Memorial Museum, Exeter, on Wednesday, Thursday, Friday and Saturday, August 20th, 21st, 22nd and 23rd, 1890.

The following will be the order of the proceedings :—

#### *Wednesday, August 20th.*

The Right Worshipful the Mayor of Exeter will hold an Evening Reception as a welcome to the Members of the British Dental Association to the City.

#### *Thursday, August 21st.*

9 a.m.—Meeting of the Representative Board in the Committee Room of the Albert Memorial Museum.

10.30 a.m.—Annual Meeting of the Association for business in the Art Gallery of the Museum. Presentation of portrait of J. Smith Turner, Esq., to the Association and of replica to Mr. Turner, followed by an address from the retiring President. Installation of new President and delivery of President's address.

11 a.m.—Papers and Discussions.

1 p.m.—Adjournment for Luncheon at Rougemont Hotel.

- 2.30 p.m.—Meeting resumed for reading and discussion of papers.  
 5 p.m.—Meeting adjourned till 10.30 a.m. August 22nd.  
 8.30 p.m.—Reception at the Museum by the Reception Committee.

*Friday, August 22nd.*

9 a.m.—Annual Meeting of the Benevolent Fund Subscribers at the Museum.

10.30 a.m.—Meeting of Association resumed for reading and discussion of papers.

1 p.m.—Adjournment for Luncheon at Rougement Hotel.

Horticultural Exhibition on Northernhay; tickets for each member and a lady will be sent to all members from a distance who notify their intention of attending the meeting.

2.30 p.m.—Meeting resumed for reading and discussion of papers.

7.30 p.m.—Annual Dinner of the Association at the Rougement Hotel. Tickets £1 1s.

*Saturday, August 23rd.*

10 a.m.—The meeting will be resumed at the Devon and Exeter Hospital, Southernhay, for demonstrations.

1 p.m.—Luncheon at Rougement Hotel, after which parties of Members and friends will be taken over the Cathedral, Guild Hall, Ruins of Rougement Castle and places of interest in the City.

4 p.m.—The President and Mrs. Browne-Mason will give an At Home with organ recital and vocal music at the Victoria Hall.

Gentlemen wishing to read papers should send in their names with title of subject at once to the hon. secretary of Association.

Gentlemen willing to demonstrate should communicate with J. McKno Ackland, Southernhay, Exeter.

Gentlemen willing to assist at the Microscopic Section should communicate with W. A. Hunt, Yeovil.

Members will find at the Albert Memorial Museum adjoining the Art Gallery a reading and writing room with facilities for posting letters and sending telegrams. The room will be supplied with writing materials and daily papers. The room for the Representative Board, general enquiry and Secretary's office will be on the ground floor of the Museum.

The chief hotels in Exeter are the "Rougement Hotel," which will be the headquarters of the Association, and which will provide a smoking-room reserved for Members of the British Dental Association only, charge for bed, breakfast and attendance 7s. 6d. per diem; the "Royal Clarence Hotel," Cathedral Yard, bed, breakfast, and attendance, 7s. 6d. per diem, this house is situated opposite the Cathedral, in the Close, and in immediate proximity to the Albert Memorial Museum; the "The London Inn," the old coaching house of the City, at the top of the High Street—charge for bed, breakfast, and attendance 7s. 6d. per diem. The tariff of the above houses will be sent on application to the proprietors. Other hotels are the "Half Moon," in the High Street—charge, bed, breakfast and attendance, 6s. 6d. a day; the "Globe," in the Cathedral Yard, and the "Queen's Hotel,"—bed, breakfast, and attendance, 5s. 6d. per diem. As August is a busy period on account of

its being the height of the touring season, early application for accommodation is desirable. Visitors to the City will find many delightful excursions for the day to the sea-side at Exmouth, Dawlish and Teignmouth; to each of these places daily excursion tickets are issued by the Great Western Railway and London and South Western Railway. Also by the London and South Western Railway to Dartmoor, from the Okehampton, Bridestowe and Lidford Railway, and at the latter station by an easy walk Lidford Gorge and Waterfall are to be reached and Exeter regained the same day. Amongst the day excursions too are circular tickets by rail and steamboat to Totnes, down the River Dart to Dartmouth, and train to Torquay, returning the same day to Exeter.

Longer trips can be made by rail and coach to Dulverton, over Exmoor to Dunster and Porlock, thence to Lynton and Lynmouth and on to Ilfracombe or Barnstaple, returning to Exeter by train; this would require two days.

The scenery on the borders of Dartmoor is remarkably fine and can be reached, the visitor will find, by train at other points besides those above mentioned; whilst all round the coasts of Devon and Cornwall are numbers of towns and watering-places that would be found attractive places for any Members who may like to extend their holidays.

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### Meeting of the Representative Board.

THE Representative Board met on Saturday, May 31st, J. SMITH TURNER, Esq., in the chair. There were present Messrs. Ackery, F. Canton, D. Hepburn, Matheson, Spokes, C. S. Tones, F. Weiss and the Hon. Secretary of London; Messrs. G. Cunningham, Cambridge; E. L. Dudley, Bath; R. P. Lennox, Cambridge; J. C. Oliver, Cardiff; Morgan Hughes, Croydon; J. A. Fothergill, Darlington; R. T. Stack, Dublin; J. T. Browne Mason, Exeter; J. A. Biggs, Glasgow; G. Brunton, Leeds; J. Renshaw, Rochdale; J. Cornelius Wheeler, Southsea; E. Apperley, Stroud; B. W. Bacon, Tunbridge Wells; W. A. Hunt, Yeovil; T. E. King, York.

Letters of regret were read from Messrs. S. Lee Rymer and R. F. H. King.

The Standing Orders were considered, revised and ordered to be issued with the bye-laws of the Association.

An alleged case of a person having obtained registration by means of fraudulent documents under Clause 37 was considered and referred to the Business Committee, and full powers given to that Committee to take action in the matter.

The treasurer reported that the balance at the bank was £338 12s., that £300 had been placed on deposit, that 243 members had paid, their subscription for the current year, but that twenty-seven members were still in arrear for the year 1889.

It was resolved "That all resolutions passed by the Representative Board which require to be brought before the Annual Meeting of the

Association for approval or rejection shall be reported to the meeting by the chairman or hon. secretary."

Mr. L. J. Mitchell, D.D.S., of London, was elected a member of the Association.

### Midland Counties Branch.

THE Annual Meeting of this Branch was held at Derby on the 8th, 9th, and 10th of May. The Guildhall had been lent for the meetings and demonstrations. Excellent arrangements had been made for the reception, comfort, and entertainment of the members and visitors, and the meeting was one of the most successful ever held by the Branch. The following is a list of those present:—G. Brunton, Leeds, President; H. C. Quinby, Liverpool, Vice-president; S. Wormald, Stockport, Hon. Treasurer; S. Lee Rymer, Croydon, President, British Dental Association. Messrs. J. H. Jones, Ashton-on-Mersey; J. A. Wilson, Bangor, North Wales; T. Mansell, Birkenhead; C. H. Cooper, T. E. Garner, E. J. Ladmore, A. A. Matthews, Bradford; D. A. Wormald, Bury; J. E. Sutton, Buxton; M. Johnson, Chester; H. Morley, T. W. F. Rowney, Derby; J. Taylor, Dewsbury; W. Broughton, Eccles; — Biggs, Glasgow; J. S. Crapper, Hanley; Arthur Cocker, A. B. Wolfenden, Halifax; Charles Rippon, J. W. Senior, Huddersfield; J. C. Storey, Hull; J. C. Birch, T. S. Carter, J. H. Nichol, H. Wyles, Leeds; E. A. Councell, F. Gaskell, J. W. Lloyd, senior, W. Mapplebeck, M. Quinby, W. H. Waite, Liverpool; L. Matheson, Dr. Mitchell, London; G. G. Campion, W. Doughan, E. Houghton, E. H. Williams, G. O. Whittaker, W. Simms, Manchester; E. Renshaw, Mansfield; J. W. Seville, Mossley; J. S. Elmitt, Newcastle-under-Lyme; H. Blandy, J. S. Hepburn, Nottingham; T. Wormald, Oldham; I. Renshaw, Rochdale; G. H. Lodge, Rotheram; F. W. Minshall, Salford; Charles Browne-Mason, Scarborough; W. C. Hartley, Shaw; F. Dale, R. C. H. Drabble, Jos. Harrison, J. Lee Pike, Charles Stokes, Sheffield; W. E. Harding, Shrewsbury; Alfred Cocker, Sowerby Bridge; J. W. Dent, Stockton-on-Tees; J. N. Manton, Wakefield; John Taylor, Warrington; W. Glaisby, T. E. King, York.

The following gentlemen were elected members:—Messrs. Alex. Fothergill, Darlington; John A. Wilson, Bangor, North Wales; T. W. F. Rowney, Derby; S. F. Elmitt, Newcastle-under-Lyme.

### RECEPTION BY THE PRESIDENT-ELECT.

On Thursday evening, May 8th, Mr. George Brunton (the President-elect) and Mrs. Brunton, of Leeds, gave a reception in the Art Gallery, which, together with the Museum, had been placed at the disposal of the Association by the Derby Corporation. There were

also a number of local guests, including Mr. Alderman Hobson, J.P. (Chairman of the Free Library and Museum Committee). The Derby Glee Union gave a musical entertainment, which was followed by a powerful reading by Mr. Alfred Macleod, lecturer on elocution in Aberdeen University. The gathering was a most pleasant and successful one.

#### THE BUSINESS MEETINGS.

The Council met in the Guildhall at nine o'clock on Friday morning. In the adjoining apartments there were several interesting demonstrations. Mr. E. Houghton, of Manchester, dealt with "Some Improvements in continuous Gum Work," with an improved furnace, using Fletcher's gasoline generator. Mr. W. E. Harding illustrated "The Immediate Treatment of Septic Roots." Mr. G. Brunton demonstrated "The Treatment of Alveolar Abscess," and Dr. L. J. Mitchell (London) "Crown and Bridge Work." There were also electric motors, accumulators, lamps, &c., by Mr. J. E. Birch, of Leeds, and Mr. W. Broughton of Manchester.

While these demonstrations were proceeding, ladies who had accompanied the members were conducted over the Royal Crown Derby China Works.

At the afternoon meeting Mr. H. C. Quinby, the retiring President, occupied the Chair. Mr. I. Renshaw, secretary *pro tem.*, read the Report of the Council, as follows:—

In presenting its Annual Report the Council has to review another successful year in the history of the Midland Branch of the Association, the close of which terminates the first decade of its existence. Since its formation its policy has been of an aggressive character, breaking up fallow ground by extending its influence to new districts, and adding largely to the membership of the Association. It has done much to break down professional jealousy, and in its place has produced and stimulated a feeling of harmony and good-will among its members, engendering in them a laudable desire to increase in knowledge and to excel in the character of their work. In proof whereof there has been a demand for more meetings, which have always been well attended and rendered increasingly interesting and valuable by the number and character of the papers, casual communications and demonstrations.

Since the last annual meeting there have been two meetings, one at Halifax in October last, and the other at Warrington in February, both of which were largely attended, and rendered specially instructive and interesting. The Council have had five meetings during the year. Four members have been elected to the Association, and nineteen to the Branch, making a total in the latter of 143 Members and five Associates. The attention of the Council has again been directed to the consideration of the large number of names which have been placed,



and which continue to be placed, upon the Dentists' Register by Clause 37 of the Dentists Act. Twenty-nine of the registrations during 1889 appear in the new issue of the Dentists' Register. The Council is of opinion that in some cases registration has been effected by fraudulent means, and a small committee has been appointed to enquire into them, with power to obtain legal advice thereon, and to prepare a report for the Council to bring before the notice of the Representative Board or the General Medical Council. It must not, however, be forgotten that the difficulty of obtaining *legal* evidence of fraud is very great, and that the onus of proof rests upon the person or persons who desire the removal of any such name from the Register before any action can be taken.

Another matter which has largely occupied the time of the Council is the consideration of the professional circular. It was felt that the letter issued in pamphlet form by the Publishing Committee, however suitable for some districts, did not meet the requirements of those comprised in the Midland Branch, and as it seemed improbable that the Representative Board would move in the matter, the Council after mature consideration published the circular of which a copy has been forwarded to each member of the Branch. This, it is hoped, may meet the feeling expressed in favour of some publication to warn the public against the largely increasing class of unregistered practitioners. Further copies may be obtained at cost price on application to Mr. S. Wormald, Stockport.

Our next annual meeting will be held at Darlington, and Mr. Alexander Fothergill has been nominated by the Council to occupy the chair for next year.

This Report will not be complete without reference to the loss which the Branch has sustained by the forced retirement, owing to increased physical infirmity, of the late honorary secretary, Mr. Waite. He was chiefly instrumental in forming the Branch, and it is mainly due to his tact and energy that it has grown in numbers and importance to the honourable position it now occupies. Elected as hon. secretary on its formation in 1880, he has directed its course from its infancy to the present time with such self-sacrificing effort and urbanity of demeanour as to win the admiration of all who have been privileged to work in co-operation with him. Though not unexpected, his resignation came upon your Council at a time when it was scarcely prepared for it, creating a vacancy which it is no sinecure for a successor to fill. Your Council, whilst trusting that he may long be spared and disposed to continue his connection with us, accord him its heartiest thanks for his long and faithful services, together with its deepest sympathy with him in the cause of his retirement.

Mr. S. WORMALD (the treasurer) next rose to present his accounts. He said that before he made the statement he would read a letter which he had received in reference to a subscription which had been

made to the Benevolent Fund. It was as follows : "Dear Sir,—Many thanks for your note, enclosing a cheque for £6 10s., collected for the Benevolent Fund at the meeting of the Midland Branch of the British Dental Association last Saturday. Please convey my best thanks to the Branch for their generous donation. I have also received 10s. 6d. from Mr. Quinby, which is to be added to the amount you sent, and therefore I enclose a receipt for £7 os. 6d."

The statement of accounts was as follows :—Balance from last year, £30 1s. 9d. ; subscriptions for the year, £27 5s., making a total of £57 6s. 9d. The expenditure for the year was £40 10s., made up of the following items : Meeting rooms and attendants, £2 14s. 6d. ; printing, £9 3s. 3d. ; reporter's fee, £1 1s. ; postages, &c., £1 19s. 3d. ; voted by Council, £15 12s. ; sectional expenses, £10 ; balance in hand, £16 15s. 9d.

The PRESIDENT moved the adoption of the Report and statement of accounts and said they were of a satisfactory character.

Dr. WAITE, in seconding the motion, said a great deal of work had been done in the past year which did not appear in the report, work in process of completion, and therefore it could not be referred to in any public statement of this kind. There was one which he should like to emphasize, and that was with regard to the professional circular. He was sorry to find that the copies had not been taken up as they might be, but he hoped there would be an alteration in this respect, as the circular had been drawn to meet the special requirements of this district, which was different from other parts of the country. A large item of the expenditure had been incurred in sending out these circulars.

The report and statement of accounts were then adopted.

The PRESIDENT said the next business was the election of secretary, and he hoped the secretary *pro. tem.* (Mr. Renshaw), who had given his services since Dr. Waite's retirement, would be appointed.

Mr. STOREY said he was exceedingly glad to have an opportunity of moving a resolution which he thought the meeting would unanimously endorse. It had been said very truly in the report that Dr. Waite was an exceedingly difficult man to follow, but he thought the Branch had been fortunate in consequence of Dr. Waite having taken under his care one who had very ably filled the office temporarily, and the members felt indebted to Mr. Renshaw for his services in the past when they also felt that he would be the best secretary they could appoint for the future. He had great pleasure in proposing that Mr. Renshaw be their secretary for the ensuing year.

Mr. STOKES (Sheffield) seconded the proposition.

The PRESIDENT expressed his concurrence with the remarks of Mr. Storey respecting Dr. Waite and Mr. Renshaw. The latter was peculiarly adapted for the office, which was onerous and difficult, and he hoped Mr. Renshaw would be elected with acclamation.

The motion was carried with acclamation.

Mr. RENSHAW thanked the meeting for their confidence, and said the present condition of the Branch showed fully how efficiently the work had been conducted by Dr. Waite.

Mr. BLANDY (Nottingham) proposed the re-election of their very worthy and esteemed friend, Mr. S. Wormald, as treasurer. His probity and competence in the past had won their entire confidence. He would not spend a penny more than the income, neither would he hesitate to tell the members when they were not meeting their engagements.

Mr. HARRISON (Sheffield) seconded the proposition, which was carried with acclamation, and Mr. WORMALD briefly replied.

Voting papers for the election of three members of the Council were then distributed, Messrs. Nicol and Brown-Mason being appointed scrutineers. The election resulted in the appointment of Mr. W. E. Harding (Shrewsbury), Mr. M. Johnson (Chester), and Mr. H. Blandy (Nottingham).

The PRESIDENT moved a vote of thanks to the Mayor and Corporation for having placed the public buildings at the disposal of the Association, which was warmly accorded.

Messrs. Campion and Johnson were nominated as members of the Representative Board.

Mr. H. C. QUINBY, the retiring President, then delivered his valedictory address before vacating the chair. He said :

Some of you will remember that at the Warrington meeting I called attention to the fact that we were treating our hon. secretary with manifest injustice, inasmuch as we were not only giving him a great deal of work without remuneration, but were making him put his hand in his own pocket for all the expenses connected with his journeys on our business. I gave notice then that I should bring forward a proposition at this meeting that we should increase our income by doubling our subscriptions, so that we might have the means of removing this reproach from our shoulders. But I am informed that such a proposition would be opposed, and as this is a matter which should not be discussed in any other spirit than that of an earnest desire to find some way of overcoming the difficulty without making the subscription obstructive, I have thought of making a suggestion in my valedictory address, so that there might be no discussion upon it until it has been well thought over. I confess that until you placed me in this chair I knew very little of the secretarial work which has to be done to keep our machine in running order. It devolves upon our hon. secretary to inquire into all the cases of doubtful and alleged fraudulent registration that occur in our district, which, as you well know, is large and populous, and has given a good many doubtful names to the Register. This is in itself an onerous duty, involving a large amount of correspondence and often making journeys

necessary for personal investigation. Of course he must attend the meetings of the Business Committee and of the Representative Board, and as these are always held in London, except on the occasion of the Annual General Meeting, it is not possible for him to take a return ticket and get back to his home the same night. He has also to arrange for our intermediate meetings and for our Council meetings, and to do the greater part of the arranging for our annual meetings. He must be well up in all Association politics in the parent society and in the branches, and this, too, involves correspondence and travelling. Our late hon. secretary will, I think, support me in the statement that the travelling expenses amount to something like £30 per annum, and I am quite sure that not one of us will think it right that this expense for doing work which is necessary to keep our Branch alive should be borne by the gentleman who gives us so much of his time. The only question is how to furnish the money. The subscriptions to the Branch amount to about £30, all of which is wanted for current expenses, and as we wish to extend our influence as much as possible, it is not thought advisable that the subscriptions should be increased. But while we are doing our utmost to make the work of the Branch interesting and instructive, to win into our circle as many as possible of our professional brethren, to elevate the professional standing of our district, and while—I think I may venture to say—we are succeeding in making the Branch meetings popular, we are, by the primary conditions of our existence as a branch, contributing four times as much money to the parent Association as we are retaining for our own purposes. I may be wrong, but it does not seem to me that we get a fair equivalent for this. Some of us go to the annual meetings, but they are too far off for the majority of us to attend. We get in the JOURNAL a very good report of what is going on in the profession, but we could get this for less than a guinea. In fact, we pay our guinea to the parent Society for the privilege of having a Branch, and then the parent Society considers itself entitled to overlook our work. Measures which we think necessary for our interests in our own locality are judged from a metropolitan standpoint to be inexpedient and unwise; our representatives to the Central Board and committee meetings are given to understand that their personal presence is undesirable; any matter of interest could be as well communicated in writing and would receive attention, but if, notwithstanding this, they choose to appear personally to press some desired measure, they are met by a solid phalanx of metropolitan members, who all speak with one tongue, and they are voted down if not silenced in any other way. Now it strikes me that it is quite time for this condition of things to come to an end. The metropolitan members are quite aware that they have no real power to interfere with our local affairs, but they do meddle for all that, and I think we should say to the central body of the British Dental Association that as we cannot trust them to look after provin-

cial interests we must ask them for a return of a portion of our subscription money, to be used by the Executive Council of the Branch for expenses in attending to local affairs. As I have already said, these remarks are a mere suggestion expressing my own feeling in the matter, but binding no one, and by all means to be repudiated by our representatives at the Representative Board if they elect to do so, collectively or individually.

In the report of the proceedings of the Council, which has been read to us to-day, there was an allusion to registration under Clause 37. This is a matter which affects us seriously. We are doing what we can to raise the standard of dental education, and the students who pass the examinations under the present curriculum are educated professional men. But it is a fact that since the 1st of January, 1880, when it was the undoubted intention of the Dentists Act that registration under Clause 37 should practically cease, there have been 292 names added to the Register under this clause, whilst the students admitted by curriculum number 265. It may be a mere coincidence, but it is certainly very alarming to find also that these irregular registrations, which were not proportionately so numerous in 1887, have since then increased very rapidly, as these figures will show :—

1887.	Licentiates registered,	42 ;	Registered under Clause 37,	10.
1888.	"	"	36 ;	"
1889.	"	"	38 ;	"
				24-
				29.

It is well for us to keep these facts before us, and to repeat them constantly at our meetings, because reiteration may in time induce the General Medical Council to put a stop to what is beginning to be disgraceful.

The time has come for me to step aside and make room for my successor in the presidential chair. We have had a year of pleasant intercourse, and I trust we have added something to our knowledge which will also have made it a profitable year. With the earnest hope that this is truly the case, and with my hearty thanks for the kindly support you have given me during my year of office, I bid you adieu.

Mr. G. A. WILLIAMS (Manchester) proposed a cordial vote of thanks to the retiring President for his able conduct during his year of office.

Dr. WAITE, in seconding the motion, referred to the able, genial, and energetic manner in which Mr. Quinby had conducted the affairs of the Branch, and said it would be impossible for them to more adequately express their feelings towards him than Mr. Quinby had expressed himself when he said it had been a year of pleasant intercourse and instruction. They were all pleased to reciprocate those remarks.

The proposition was carried unanimously.

The retiring PRESIDENT, in reply, said it was not always an enviable position to be President. It conferred honour on a man, but it also conferred a great deal of hard work and responsibility.

Mr. GEORGE BRUNTON (of Leeds)—the new President—then took the chair amidst enthusiasm. After the applause had subsided he delivered his inaugural address. He said: I will do my utmost to uphold the dignity and further the interest of this Branch of the Association, and I thank you for the kind reception you have accorded to me.

[Mr. Brunton's inaugural address appears under the head of Original Communications.]

Mr. W. E. HARDING moved a vote of thanks to the President for his able and interesting address.

Mr. W. GLAISBY seconded the proposition.

Mr. S. LEE RYMER, in supporting it, said they must all agree that the address was the product of a considerable amount of thought, and was deeply interesting. Some of the points were new, and some of the suggestions were important. He had never before heard it suggested that dentists should operate with both hands, but he hoped that they would endeavour to reach that height of dexterity.

The motion, on being put by Mr. QUINBY, was carried amidst loud applause.

The PRESIDENT, in reply, said there was no necessity for any expression of gratitude. Perhaps, when the finger of the critic had run through the address a different judgment from that now expressed might be formed of it. However, if they were pleased, he was also pleased.

The SECRETARY said they would fail as a Branch of the British Dental Association if they did not pay their debts as they proceeded. One debt which they owed was a debt of gratitude to Mr. Henry Morley, of Derby, for the active efforts he had put forth in endeavouring to make that meeting as successful as it had proved to be. Without Mr. Morley's assistance they could not have had so comfortable and excellent a gathering. Mr. Morley had rendered him a great deal of help, and had also performed a considerable amount of work unassisted. He therefore hoped the meeting would accord him a hearty vote of thanks for his kindness to them.

The PRESIDENT said it was quite unnecessary for such a vote to be seconded, for he perceived from their expression that they unanimously desired to thank Mr. Morley.

Mr. MORLEY, who was received with several rounds of applause, said that if any little service which he had had the pleasure of rendering, had added to the comfort of the Association, and to the success of the gathering he was delighted.

#### CASUAL COMMUNICATIONS.

The PRESIDENT exhibited a new set of mouth files sent by Dr. Miriam, and said a description of them would be found in the Archives of Dentistry for March. The articles were sent round and inspected

with a good deal of interest. He also showed a contrivance of his own for filing rouge paper ; a diamond disc for cutting sections ; an article for preventing water when the syringe was being used, coming out of the patient's mouth and distributing itself over the patient's clothing, and an ejector tube.

Mr. HARDING entered into an elaborate explanation respecting a process adopted by him for the speedy and effectual treatment of nerve canals, saying that the work might now be accomplished in one sitting, although two sittings were the safest.

The PRESIDENT considered the communication an important one, and related his own experience with regard to the drying of these canals.

Dr. MITCHELL, Mr. LADMORE and Mr. STOKES took part in the discussion which followed, after which Mr. HARDING answered several points raised by the different speakers.

Professor ERNEST JACOB, of the Yorkshire College, Leeds, read a paper on "Physician or Dentist."

The rise of specialism in all branches of modern scientific investigation, while greatly increasing our knowledge by focussing on each subject the whole attention of a circle of workers, has yet its disadvantages. It is sometimes not easy to say precisely what special department includes a particular case. In medicine we see occasionally by the advance of knowledge of certain pathological conditions, a case placed at one time under one speciality ; at another time under another ; as for instance empyema of the maxillary sinus, as it is frequently called, which is now known to depend very frequently on chronic nasal catarrh and treated by the nasal specialist, who perforates from the nasal and not the buccal cavity. Every medical man, who has much to do with facial neuralgia, must feel considerable hesitation in forming an opinion on the etiology of pain affecting the regions contiguous to the dental. We have to face the fact that on the one hand pain caused by dental disease may be felt at points far removed from the situation of the offending member—the occipital region for instance, and that a large number of persons have considerable dental caries without feeling much pain of the neuralgic type. It is with the hope of obtaining from the skilled experience of the dental profession some information which can assist the medical man in his work, and to indicate one or two points in which the two branches of the great profession of healing can assist each other, that I venture to take up your time to-day. In the out-patient department of one of the great medical charities of Leeds, I see a large number of persons, and of these patients quite a large proportion complain of facial pain, more or less connected with, or contiguous to the maxillary branches of the fifth nerve. A glance at their mouths shows as a rule very obvious signs of dental decay. (I regret to say that at Leeds as yet the poor have no opportunity in our

medical charities of getting any dental operation but that of extraction performed). The point on which I so frequently feel doubt is how far this pain depends on the dental condition, to be relieved only by dental operation? How far does it belong to the general field of medicine? There is little difficulty, as a rule, in ascertaining the presence of inflammatory conditions—periostitis for instance, whether or not attended by suppuration, although I have known patients dosed with nearly every available drug for a simple alveolitis. The difficulty exists when the pain is of the fitful intermittent type, increasing at night, and in exhausted states of the body. Supposing also on a careful examination of the mouth with the help of a strong light, a mouth mirror and dental probe, one or more teeth should be discovered seriously diseased, with much sensitive dentine, or even partially exposed pulps. Inquiry often elicits the information that the teeth have been in that state for many months, the pain perhaps only felt for as many weeks. I am supposing an unusually careful examination, for the dental probe is not a familiar tool in the hands of most medical men, especially physicians. The question is a very important one as regards treatment. The rectification of faulty dental conditions in the case of those who can afford the requisite time and means, is often a prolonged and painful business, and the patient asks for immediate relief. Is this to be given by applying anodyne and antiseptic dressings to the offending teeth, or by the administration of opium, arsenic, antipyrin, gelseminum, exalgine, and the rest of the usual battery of pain-healers, or by antiarthritic and purgative drugs in cases of the gouty and dyspeptic. Of course obviously faulty diatheses must be treated in all cases, and even if the carious teeth had nothing to do with the pain one would advise dental treatment, but the question of diagnosis may still remain unsolved. We must not forget that to produce true neuralgia we require two factors. First, the requisite irritability or increased sensitiveness of the general system; secondly, the peripheral irritation which, of itself too weak to raise the nerve-storm in a healthy system, will in a weakened condition, either congenital or acquired, produce the attack of pain. The one is the loading of the gun, the other the pulling of the trigger. The causes are two: the treatment should also be dual. By far the greater proportion of the cases of dental and facial neuralgia which come before me are in badly fed, hard-worked women, whose lives are passed in ill-ventilated workshops, while their food consists mainly of tea and bread and butter. At a recently erected clothing warehouse and mill in Leeds, I was told by the builders that it was not proposed to place any sort of heating apparatus in the work-rooms, "the girls would keep each other warm." The question of artificial dentures to provide for mastication in the absence of natural teeth bears on my subject, but is so thoroughly appreciated by the medical profession and the public that I will not touch on it here. I have mentioned the subject of dental neuralgia as



one on which the physician may well seek the opinion of the dentist. There is one kind of disease, which it is most important the dentist should appreciate, and refer to the medical practitioner. Enlargement of the sub-maxillary glands is frequently produced by carious teeth, and such cases are very properly put under your care ; but in many cases there exists as well a condition of enlargement of tonsils, both the faucial and pharyngeal, with a growth of adenoid vegetations which produce, if unchecked, a most serious train of consequences. Dr. Scanes Spicer has recently stated in a very interesting communication to the Odontological Society the opinion commonly held by specialists in throat diseases, that obstructions to the nasal passages in young children produce serious alterations in the development of the jaws. As the arrest and perversion of the development causes crowding and irregularity of the teeth, the dental practitioner is likely to be consulted in the case. An early recognition of the true causes of this perverted growth, and the removal of the various methods of the nasal obstruction may be a sounder plan of treatment than the adoption of merely dental methods of rectification. Dr. Spicer has also pointed out that the open mouth greatly conduces to alteration of the normal secretions of the buccal cavity, and thereby conduces to the injury of the teeth. I quite agree with him on this point. It is most remarkable how little these conditions are noticed both by parents and the patients themselves. It is often necessary to get the former to specially watch the children at night to see if the mouth is open, and the breathing of the snoring type usual in such cases, but the particular expression of face acquired by these sufferers is very characteristic, and easily recognised by those to whom the peculiarity has once been pointed out. One more question I would ask. Recent investigation and clinical observation have shown that irritation of the termination of nerves distributed to the mucous membrane of the nose, provokes in some sensitive persons a number of remarkable and severe symptoms, such as spasmodic difficulty of breathing of asthmatic type, while the pressure of adenoid granulations of the pharynx, which has been just referred to, and the obstruction to nasal respiration thus occasioned may produce in the young a condition of impaired intelligence and inability to study, which has recently been named "Aprosexia." It is reasonable to suppose that with sensitive organisations, the irritation of other branches of the fifth nerve may produce analogous results, and some, at least, of the abnormal sensations, complained of in the neighbourhood of the lower jaw and the pharynx, cough, for instance, and sensations which are very difficult to localize, at least by the patient, may be due to dental causes. These cases are an immense trouble to every practitioner of medicine. I am not aware that many cases of the kind have been put on record, though I have heard of one where obstinate megrims disappeared concurrently with the removal of a number of roots. It is difficult to see how the

doctrine of nasal reflex neuroses, so ably urged by Hack, can stop at the mucous membrane of the terminate bones. I do not forget that in the infant every conceivable ailment, from an attack of ill-temper to small-pox, is attributed by the mother to the development of the teeth. Here the doctrine of reflex neuroses is probably as much over-worked as, perhaps, in the adult it is undervalued.

The PRESIDENT said the paper contained many valuable suggestions, especially with reference to the treatment of diseases by the physician and dentist. He thought the two ought to work together, and endeavour to come to a conclusion about the causes of various ailments.

Mr. BLANDY referred to a severe case of acute necrosis which was under treatment at the Nottingham Hospital, and entered into a description of the case.

Mr. HARDING said that some medical practitioners seemed to think that teeth were beneath their notice, and that he had come across several cases where leading surgeons—men of great experience and considerable attainments—had been misled with regard to neuralgic pains on the fifth nerve. Dentists frequently found that it was not the tooth to which the patients pointed which gave the trouble. A general practitioner was often deceived, for when he looked into the mouth and saw bad teeth he said they must be removed. Dentists, as old practitioners, however, knew that it was not the badly decayed teeth, but the teeth which were exposed and suppurating that gave the trouble. Dead roots might give neurotic pains, but they more frequently arose from teeth with the pulp wholly or partially destroyed.

Mr. MATHESON said that dentists, with all their training and special knowledge, often felt it difficult to localise neuralgic pain. There might not be a cavity apparent at first sight, but when a careful examination was made one was usually found. Neuralgic pain might be produced by a impacted wisdom tooth.

Mr. HEPBURN produced a curious specimen of an impacted wisdom tooth which had caused neuralgia, and which, by its extraction, had given relief when ordinary remedies had failed.

Mr. CRAPPER and Mr. J. STOREY also took part in the discussion, and Professor JACOB replied, thanking the meeting for the valuable hints he had received.

The PRESIDENT thanked Professor Jacob for his valuable paper and his attendance.

Mr. L. MATHESON, L.D.S.Eng., London, next read his paper entitled "Notes on Crown Work," which we hope to publish in our July issue.

Dr. MITCHELL, the PRESIDENT, and Mr. HARDING, made a few remarks, after which the discussion closed.

The PRESIDENT mentioned that Messrs. Ash and Sons and the Dental Manufacturing Association had lent portable head rests to fix

to chairs, so that the demonstrations might be carried out successfully.

Mr. MORLEY thereupon proposed a vote of thanks to the two firms named, and it, as well as a similar compliment to the readers of papers was carried.

The proceedings then terminated.

#### THE DINNER.

IN the evening the members dined together at the Midland Hotel. Mr. G. BRUNTON, the President, occupied the chair, and in addition to the members there were also present Dr. Curgenven, Dr. Sharpe, Dr. Hough, and Dr. Benthall, members of the Medical Staff of the Derbyshire Infirmary, Dr. Gentles and Mr. J. Wright Baker (a former medical officer of the Infirmary). After the toast of "The Queen" had been felicitously proposed by the President the National Anthem was sung.

Dr. CURGENVEN proposed "The British Dental Association and the Midland Branch." Having referred with regret to the unavoidable absence of the Mayor, he congratulated the members upon the fact that there were now connected with the Midland Branch 140 members, and that there were between 800 and 900 members of the parent Society. This was most creditable, considering that it had only been in existence ten years. He understood that one of the objects of the Association was to uphold the dignity of the dental profession. Secondly, it sought the protection of those who were on the Register, while it also enabled the members to hold such pleasant gatherings as they had held that day, and to extend their knowledge to one another. They ought to be congratulated, because they were really specialists. They devoted the whole of their time and energies to one particular branch of surgery, and he congratulated them upon the rapid strides they had made in their art. They deserved the gratitude of the whole community, for they not only relieved, but prevented human pain and suffering. Long might the dental profession flourish.

The toast was received with enthusiasm.

Responding to the toast, "British Dental Association and Midland Branch," Mr. WAITE said: Mr. President and Gentlemen: my first duty is to thank you all very sincerely for the kind manner in which the toast has been proposed and received. I have a sort of suspicion that the architect of the toast-list had some design in the construction of this toast, and that he intended it as a challenge to me to say something to you about the relation of the British Dental Association to the Midland Branch. Well, gentlemen, I frankly confess the theme is decidedly tempting, but I must not yield, because the subject would scarcely entertain our visitors, besides which, it might take up more time than I have any business to occupy this

evening. I think it extremely likely the question will have to be thoroughly discussed before very long, unless there is a change of attitude, and when the time comes, I would say with the writer of "John Gilpin," "May I be there to see." The two or three remarks I shall make this evening have exclusive reference to our own Branch, and I shall address myself chiefly to our guests.

The Midland Branch, whose anniversary we celebrate to-day, is at once the oldest, the largest, and, I am proud to say, the most active Branch of the British Dental Association. During the ten years of its existence the Branch has held about thirty professional meetings, in fifteen of the principal cities and towns of the district, viz. : Manchester, Liverpool, Leeds, Shrewsbury, Sheffield, Nottingham, Bradford, Chester, York, Lancaster, Darlington, Bolton, Halifax, Warrington, and now at Derby. The object of these meetings has been two-fold :

First, we strive to improve ourselves. As self-preservation is said to be the first law of nature, so, self-improvement may be said to be the first law of human progress. By papers, communications and discussions on all manner of professional topics, by practical and clinical demonstrations in every branch of our work, by a free interchange of ideas, experiments, opinions, and methods of practice, &c., we seek to benefit ourselves and each other, and I am certain I only utter the settled conviction of those who have attended our meetings, when I say that this part of our aim has been achieved with marked success.

Second, we desire to inform the general public as to the true position and possibilities of Dental Surgery, and here our task is not so easy. We invite leading members of the medical, and other professions, to attend our meetings, and to acquaint themselves with our movements, so that we may prove our right to be regarded as fellow-labourers in the relief of human suffering and the promotion of human happiness. We want the public to know that within the past thirty years Dental Surgery has emerged from the comparative darkness of a mechanical handicraft, to the morning dawn of a most needful, useful and beneficial speciality of the "art of healing;" that, the education of a dental surgeon is as complete in his department as the education of a medical practitioner, and that the examination for the Dental License is as thorough and searching as that required for any other professional degree. Wherefore, that the educated dental surgeon is entitled, professionally speaking, to the fullest confidence and respect, in regard to the treatment of those organs to which he devotes his attention.

We want the public to know that the grand aim of modern dental surgery is the preservation of natural teeth ; that it is rarely, if ever necessary to extract teeth in order to relieve pain (a most able and excellent article on this point appeared in *The Lancet* for December

28th, written by our worthy ex-President, Mr. Quinby) ; that toothache can be cured as surely, nay, more surely, than many of the pains to which the body is liable ; and that extraction of teeth is the last operation the educated dental surgeon desires to perform.

We want the public to know that toothache is by no means an inevitable item of human experience ; that it may be avoided in the majority of cases by a little timely attention and care ; but that the highest services dental surgery can render are denied to those who never take any care, and who never think of the dentist till they are overtaken by a raging toothache.

We want the public to know that in proportion as they learn to bestow a little attention on their teeth—to have them periodically examined, so that the ravages of disease may be confronted by dental skill—in that ratio toothache will gradually become less frequent and less severe.

We want the public to know that, where through ignorance or other causes parents have suffered from dental derangement, they may (if they are so minded) save their children, to a considerable extent, from a similar experience ; that it is a terrible mistake to allow young people's teeth to be recklessly removed, because, forsooth, it is easy to obtain artificial substitutes ; that a little money laid out in taking care of the natural teeth would, in the end, prove a far more profitable investment than money spent in artificial substitutes. We have no wish to disparage the fair value of artificial teeth, far from it ; we do want the public, however, to estimate them aright ; to regard them as they would a cork leg, needful and valuable only when misfortune or accident has rendered them necessary.

We want the public to know that the advance of modern dentistry is all in the interests of the people ; that its development tends ever towards widening and increasing the facilities of service, so that the resources of dental surgery are daily becoming more possible to the many, although they are by no means so lucrative to the few. In proof of this we might refer to the vast amount of work daily performed at our dental hospitals, to be found in nearly every large town in the kingdom.

We want the public to know that the educated dental surgeon does not seek to attract patients by inducements of "low fees," or by claiming for himself superior knowledge or skill above his fellows. He relies for success on the simple recommendation of those for whom he has performed useful operations, sure that if his work prove beneficial they will spread his fame among their friends and acquaintances. These are some of the grounds on which we claim a place among the learned professions, not alone by reason of our educational advantages, but because it is our constant endeavour to wage war with disease and to assuage human suffering. We enjoy a vantage ground of opportunity, whenever our patients will permit us, in that we can

foresee and hinder, if not entirely prevent, the progress of dental disease ; therefore, we want the public to understand, so that they may co-operate with us in the ministry of physical benefits to themselves and their offspring. We have no secrets from each other, and nothing to conceal from the public. Our methods are simple, though our operations are often difficult. There is nothing the educated dental surgeon desires more from his patient than that he should take an intelligent interest in every step of the process by which he is treated ; and this because it is impossible to work along the higher lines without the earnest assistance of our patients.

I believe the time will come when the forceps, with its attendant evils, will become an instrument of comparatively rare employment, and the educated dental surgeon will rejoice to find its use diminishing year by year. I believe this point of advance is being already realised in the experience of some of our transatlantic brethren, and we will do all we can to bring about a like happy result. Thus we shall be recognised as benefactors to our kind, and so also we shall achieve the noblest ambition of the true physician, which is not only to restore but to prevent disorder and disease.

Allow me to congratulate you, Mr. President, on the position you occupy to-day. From the beginning you have been a faithful and earnest worker amongst us, and you well deserve the honour conferred upon you. I hope that during your tenure of office, the Midland Branch will maintain its reputation for independence and activity ; persevering in the grand work of self-improvement and the equally necessary work of public instruction. Let me say I trust we shall never be deterred by fear or favour from any course which commends itself to our judgment as wise or beneficial in the pursuit of these worthy objects. Opposition is a certain quantity in certain quarters ; let us resolve that opposition shall only stimulate our zeal and quicken our activity. What we have won we mean to retain, and most jealously of all let us guard our liberties. We know something at least of the peculiar conditions of our district, and we are able to judge how to meet its requirements without the unsolicited opinions of those who live under vastly different conditions and who are quite unable to comprehend our position. The day of dictation has gone ; a brighter day has dawned—a day of full and free and fair discussion—a day when privilege is limited only by our use or *abuse* of opportunity—a day of individual effort because it is also a day of individual responsibility. The Midland Branch is not an oligarchy ! much less is it a despotism ! It is a federation of professional brethren united for the purposes to which I have referred. The banner first raised aloft by our brave old friend Sidney Wormald in 1875, still floats above us in the Midland Branch, and on it are inscribed our grand old watch-words “ Liberty and Progress.”

Mr. H. BLANDY (Nottingham) proposed “ The Town and Trade of

Derby," expressing his satisfaction that it was in a good condition, and the wish that the trade of Nottingham was equally flourishing.

The PRESIDENT said he wished to inform the company of a wonderful piece of bridge-work which had been accomplished since their meeting. It was something in the form of a golden bridge between the Midland Branch of the Association and the various dental schools throughout the country. Their well-trying and worthy old friend, Mr. Thomas Fletcher, had offered to give £20 a year for five years towards a scholarship. Mr. Quinby had also offered to give £20 a year for five years, and the President of the Association, Mr. Lee Rymer had offered the same sum. It was hoped these sums would form the nucleus of a fund, and that many of their friends would follow this good and generous example, so that the Midland Branch would be allowed to carry out a scheme proposed by Mr. Fletcher to offer scholarships at the various dental schools throughout the country. That scheme was merely drafted at present. He was delighted that such a scheme had emanated from Mr. Fletcher, and that it had been announced at the fine old town of Derby.

Mr. L. MATHESON (London) proposed "The Derby Medical Charities." He said Derby was the centre of a large district, and the benefits which its Medical Charities conferred extended to a numerous population. He expressed his regret that the present sanitary condition of the Derbyshire Infirmary was defective, and said "that its air passages were in such a bad way and its whole system in such an extremely diseased condition, that the question was whether a change of air would be beneficial and whether it would not have to go to a better country." He hoped, however, that when the proper remedy had been applied a dental surgeon would be permanently attached to the staff, which was not the case at the present time. All present would concur with him as to the immense advantage such an appointment would confer upon the general community, and that it was advisable for such a position to be in existence at every hospital in the country.

Mr. J. WRIGHT BAKER, consulting surgeon to the Derbyshire Infirmary, whose name had been coupled with the toast, responded. It was very lamentable, he said, that the drainage of the Derbyshire Infirmary was so defective, but he had the fullest confidence that the Committee, aided by the present medical and surgical staff, would take adequate means to provide a proper and effectual remedy. Most cordially did he agree that there should be a dental surgeon permanently attached to the medical staff of that Institution. During the time he held office as surgeon of the Institution he and his colleagues had repeated occasion to call in the assistance of Mr. Morley, and he was glad to take that opportunity of saying how thoroughly they welcomed his advice and assistance which he gave in the most prompt and ready manner and which most materially aided them.

He mentioned that the Derbyshire Convalescent Home and the Children's Hospital were flourishing, and said that on behalf of himself and the medical gentlemen present, he wished to say how greatly they appreciated the efforts of the dental profession. They also desired to co-operate with them in the fullest degree, feeling that it would be most beneficial to the general community.

Mr. H. C. QUINBY submitted the toast of "The Benevolent Fund." He said the toast would appeal to their highest and best sympathies. The report read by the honorary secretary last August, contained such passages as this—"The general business brought before the Committee in the past year, has been of the usual description. Several widows and orphans of dentists have been added to those receiving benefits from the fund . . . As usual the Committee found that the best way to assist a family in distress was to place one or two children at a good school, where they were not only educated but provided for in nearly every way . . . It would be the duty of the Committee to complete the advantages thus conferred, by placing them in suitable positions to earn their own livelihood, and help the family to overcome the pinch of poverty at home." These quotations spoke for themselves and showed that the Committee was working on the right lines. The dentist's profession was very trying to many constitutions in consequence of the close confinement in the day-time, and the demands upon the time at nights for mechanical operations, the constant demand upon the sympathies, from the necessity for inflicting a certain amount of pain in order to give relief and assistance. All these things broke down their strength, and frequently their slender incomes prevented them from saving sufficient to keep the wolf from the door in case of misfortune. This fund, therefore, provided relief, but it did not degrade any man, and it was a great consolation to know that if he were unable to struggle, there would be some assistance rendered to those who looked to him for bread.

Mr. S. LEE RYMER, in responding, expressed a belief that the British Dental Benevolent Fund was a crown of glory to the Association. It was, he said, the only Dental Benevolent Fund that he knew of in the world, and therefore its position was unique. He knew that in the Midland Branch of the Association there was great interest in it, for he remembered reading lately that at a meeting held in Warrington, the box went round and £7 was collected. That was a most liberal contribution for a small meeting, and he thanked the Branch for their liberality on that occasion. But the Committee could not trust to donations alone; they must look for steady support in the shape of annual subscriptions. He knew that there was a readiness on the part of the members generally, but it might be that the matter had escaped the notice of some members of the Branch, and if so he was quite sure it only required their attention to be drawn to it to ensure their sympathy and support to the fund. When asking their



friends to support the fund, it was only right they should know that the amount confided to the Committee's care was distributed with great economy, and with a due regard for the special objects of the fund. The Chairman of the Committee was Mr. Alfred Woodhouse, whom they knew well. They knew his kindness of heart, and also that he was a thorough man of business. Then as to their Honorary Secretary, Mr. George W. Parkinson. He could not speak too highly of the immense care and attention and the large amount of time Mr. Parkinson devoted to this fund. Every case which came before the Committee was by him personally investigated, and, therefore, there was no waste of the money placed at the Committee's disposal. It was true that cases were brought before them which were not always *bona fide*, but it was necessary for any persons attempting to defraud the fund to be very early risers indeed to get over Mr. Parkinson. In the case of a widow alone she received help, while in the case of families, assistance was rendered by placing children at school, and this formed the most successful part of their operations. Orphans had been placed at school, and several had been apprenticed through the instrumentality of the fund. There was also another class of persons who had been assisted, where the investigations were sometimes painful, and extremely delicate and responsible. There were before the Committee the names of gentlemen who had been in actual and *bona fide* distress, who had been relieved through this fund, and thus enabled to tide over their difficulties and retrieve their positions, and who, but for the temporary aid of this fund, would have been absolutely overwhelmed. That was the way in which the fund was being dispensed. The Committee wished they could provide annuities for the aged, but with the present funds that was impossible. He hoped, however, that in the future that might be possible, and that they should be able to aid permanently disabled and aged members of the profession. When he told the company that what had been done had been accomplished through the instrumentality of a small income of about £400 a year, they would agree that the Committee had exercised great discrimination in their administration, and there had also been great economy in the management, for the expenses last year scarcely amounted to £13, including postage and personal investigations in different parts of the country. It was satisfactory to know that they had thus comforted, and sometimes saved from annihilation their professional brethren in distress, and as the pleasure derived in carrying on such a work was great, their sympathies were with the words which Shakespeare placed in the mouth of Portia—viz.,

“ The quality of mercy is not strain'd,  
It droppeth as the gentle rain from heaven  
Upon the place beneath ; it is twice bless'd,  
It blesseth him that gives and him that takes.”

Mr. E. J. LADMORE proposed "Our Visitors," saying those who had honoured them with their presence that evening would go away deeply interested in the position and operations of the Association.

Professor JACOB, in responding, congratulated the Branch upon the general success of the meeting. He had been brought into contact with members of the dental profession from his early childhood, and had always appreciated their high character and professional skill. While in connection with a large medical charity to which he was attached, he had been pleased to seek the advice and assistance of gentlemen of that profession. As secretary of probably the largest medical association in the north of England—the Leeds and North-West Riding Medical Association—he had a knowledge of the objects of such gatherings as they had held that day, and it seemed to him that their one fault was that there was not quite enough of them. In a large and populous district like theirs a larger number of meetings should be held, as they had no patent rights and no secrets, and therefore the oftener they met together to exchange their opinions, knowledge and ideas so much the better for the profession and the public.

Mr. S. WORMALD proposed "The President." He said that by the constitution of the Midland Branch they had every year to regret the retirement and the loss of one president, and to rejoice, at the same time, over the acceptance of office by a new president. He should not speak in eulogistic terms of the new president in his presence, but he would say he was no stranger to them. He had worked with them for the progress, advancement, and welfare of the dental profession, and he deemed that to be a sufficiently worthy motive for them to place him in that high and honourable position. He felt sure Mr. Brunton would do his duty to the grand Midland Branch of the British Dental Association. "England expected every man would do his duty," and if the members would rally round and assist the President, they might be assured his term of office would be highly successful and most beneficial to the Branch.

The toast was drunk with musical honours.

The PRESIDENT, who was received with applause, said he was quite a humble member of the Branch, forced into a position of eminence which he did not deserve. He would nevertheless endeavour to perform the duties of President efficiently and to their satisfaction. The amount realised by sending the collection box round for the Benevolent Fund was £7.

Mr. S. LEE RYMER proposed "The Health of the Secretary," which was received with enthusiasm.

Mr. RENSHAW, in response, said all would agree with him in saying the meeting at Derby had been a very successful one—indeed, one of the most successful they had held in connection with the Midland Branch. He hoped their next meeting might be equally as good, and

that they would depart from their ordinary course on that occasion by having, at the close of their day's proceedings, a *conversazione* instead of a dinner. He however hoped that the Benevolent Fund would not suffer in consequence.

This concluded the toast list, and the gathering, which had been of a most pleasant and gratifying character, then terminated.

#### EXCURSION TO CHATSWORTH.

On Saturday, the members and their friends, accompanied by many ladies, joined in an Excursion to Chatsworth (the seat of the Duke of Devonshire), and to Haddon Hall (the seat of the Duke of Rutland). The party left Derby in three special saloon carriages for Rowsley, where waggonettes were provided for proceeding to Chatsworth. On arriving at the house the company was divided into sections, and conducted through the various rooms and galleries, in which are so many costly treasures and exquisite works of art. Afterwards the gardens and grounds were visited, during a special display of the fountains, including "The Emperor." At Baslow, a welcome and excellent luncheon had been provided. Short and pleasant speeches were given, and afterwards carriages were taken for Haddon Hall. Want of time precluded a thorough inspection of the interesting historical details connected with the place; but the day was one of unqualified success and enjoyment. Tea was served in some of the old rooms, and the company separated.

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#### Southern Counties Branch.

The Annual Meeting of 1890 will be held at the Surbiton Assembly Rooms, on Saturday, June 21st.

#### PROGRAMME.

12 o'clock—River Excursion. The President-Elect (F. J. Van der Pant, Esq.) kindly invites members and visitors to accompany him on the steam launch, "Princess Beatrice," for a trip up the Thames. The boat will start from Kingston Bridge punctually at 12 o'clock. Lunch will be provided, and the Council will hold their Meeting on board.

4 o'clock.—The General Meeting will be held at the Surbiton Assembly Rooms. The President (W. B. Bacon, Esq.) will deliver his valedictory Address, and the President-Elect will then take the Chair and deliver an Inaugural Address. The Council will present their report for the past year. With regard to the election of officers for the ensuing year, the attention of members is specially drawn to a new regulation of the Council, which is as follows:—"All candidates for election to office at the Annual Meeting must be duly proposed and seconded, and the names given in writing to the Hon. Secretary

prior to the commencement of the meeting." Members wishing to propose candidates for any office are therefore invited to send in the names as soon as possible to the Hon Secretary.

The following is the list of Officers recommended by the Council for election :—President, F. J. Van der Pant, L.D.S.I.; President-elect, G. Henry, L.D.S.Eng.; Vice-President, W. B. Bacon, L.D.S.I.; Hon. Treasurer, J. H. Redman, L.D.S.I., D.D.S.; Hon. Secretary, Morgan Hughes, M.R.C.S., L.D.S.Eng. In accordance with the bye-laws, the following three gentlemen retire from the Council this year :—Messrs. G. Henry, J. Henry Whatford, and J. E. Welch. Of these Mr. Welch is the only one seeking re-election, and he has been already duly proposed and seconded.

Papers, &c., have been promised by the following gentlemen :—Walter Harrison, L.D.S.Eng., D.M.D., will open a discussion on "Dental Education." Messrs. Martin Henry, L.D.S.Eng., G. Pedley, and George Henry, L.D.S., will bring forward casual communications. Gentlemen wishing to introduce other subjects will much oblige by giving notice beforehand to the Hon Secretary.

6 o'clock.—Dinner at the Surbiton Assembly Rooms. Tickets, 7s. 6d. each (without wine), to be obtained of the Hon. Secretary, Morgan Hughes, 4, Wellesley Villas, Croydon, prior to Wednesday, June 18th, after which an extra 2s. 6d. will be charged.

N.B.—It will much facilitate the arrangements for the comfort of members if they will kindly fill in answers to the questions on the Post Card, signing their full names and addresses, and return as soon as possible.

Members coming by train should get out at Kingston Station for the Excursion and at Surbiton Station for the Meeting or Dinner. Return Tickets are available from either Station, and there is a frequent train service to London, or Clapham Junction.

MORGAN HUGHES, *Hon. Sec.*

4, *Wellesley Villas, Croydon,*  
*June 2nd, 1890.*

### Eastern Counties Branch.

THE Annual General Meeting will be held in the board room of the Hospital, Lowestoft, on Wednesday, June 25th, the President, Amos Kirby, L.D.S.Eng., in the chair.

The following will be the order of proceedings :—

9.0 a.m.—Meeting of the Council.

10.0 a.m.—Business Papers, &c.

1.0 p.m.—Adjournment for Luncheon.

2.30 p.m.—Continuation of Papers, &c.

Mr. R. P. Lennox will show—(1) "Some Further Applications of

the Method of Crowning Roots Shown last year ; (2) "A Contrivance for Preventing the Lower Plate from Slipping Forward in an Edentulous Mouth. A case in practice ;" (3) "A Method of using the Booth Pearsall Flask whereby the Striking up of Plates is Facilitated."

G. Cunningham, M.A.Cantab., L.D.S.Eng., D.M.D., will present and explain specimens of a new method of gold-plate work, *without* metal dies, by Dr. Michaels of Paris.

Papers on "The Projection Lantern as a Means of Diffusing Popular Knowledge on the care of the Teeth," with lime light illustrations, by G. Cunningham ; on "Dental Departments in General Hospitals," by W. A. Rhodes, L.D.S.I.

Annual Dinner at 7.30. Charge 7s. 6d., without wine.

The principal hotels are the "Royal Hotel" and the "Suffolk Hotel."

Early application should be made for accommodation as the popular sea-side resort is now in full season. The Hon. Secretary will be glad to receive the names of Members of the Association who intend being present at the Meeting or Dinner.

W. A. RHODES, *Hon. Secretary.*

53, *Trumpington Street,*  
*Cambridge.*

## ORIGINAL COMMUNICATIONS.

### Inaugural Address.\*

By GEORGE BRUNTON, Leeds.

PRESIDENT OF THE MIDLAND COUNTIES BRANCH.

ALTHOUGH dentistry as an art dates far back in the ages, as evidenced by the remains found in Egyptian and Etruscan tombs, dentistry as a science and art has only attained a recognised position in modern times. Dental literature proper dates from about 1536. A quarto volume was published at Frankfurt, on "Zahnarzney," without an author's name ; in 1557 one De Castrillo issued a book entitled "De Dentitione," at Valadolid. In Venice, one Bartholomæi Eustachius published, in 1563, a vol., "Libellus de Dentibus." Monanvivo, at Basle, in Switzerland, in 1578 ; Hamard Urbain, at Lyons, France, in 1582 ; and Heurnius, at Leyden, in Holland, in 1602, also published works on dentistry. The first dental pharmacopœia was published by Bunon, of Paris, in 1746 ; in the same year, also at Paris, a dissertation on arti-

\* Delivered at the Annual Meeting of the Midland Counties Branch, held at Derby, on May 9th, 1890.

ficial teeth by M. Mouton. John Hunter's great work, "Natural History of the Teeth," came out in 1771; and in 1778 his "Diseases of the Teeth." In the same year, at Edinburgh, T. H. Jackson published his "Physiology and Pathology of the Eruption of the Teeth." In 1797 an octavo volume was published by Dr. Chemant, in London, on "Artificial Teeth—Mineral Paste Teeth." J. R. Dubal, a Frenchman, published, in 1802, a volume, "On the Accidents which Happen during the Extraction of Teeth." Not, however, till 1820, do we find any book published on the mechanical art of dentistry. The first I find any mention of is "De l'Art Mechanique du Dentiste," in two vols., by C. F. Delabarre. The first work published in England on the teeth bears the date 1687, but no author's name. It is a quarto volume, entitled, "Curious Observations on that part of Chirurgery relating to the Teeth." The first work published in America, "On the Human Teeth," is by R. L. Skinner, New York, in 1801. About the same date an article was published in the *Medical Repository*, Vol. I., No. 4, by Foot, "Why Defects of the Teeth are so Frequent in America." Dentistry even formed the theme for a poet, as we find Solyman Brown publishing a poem on "Dentologia" in 1833. Periodical dental literature was first started in America by the publication, in 1839, monthly, of *The American Journal of Dental Science*; England followed, four years later, in 1843, with *The Quarterly Journal of Dental Science*, published in London; Germany, in 1855; France, in 1857; Italy, in 1866; Spain, in 1872; and Denmark in 1873.

But we have gone on too rapidly; let us go back to the great English classic works, "Natural History of the Teeth," 1771; and "Diseases of the Teeth," 1778, written by that worthy Scotchman John Hunter, Surgeon Extraordinary to the King, and Fellow of the Royal Society, in whose works, still worthy of perusal, we find a clear statement of the knowledge of dental science and art at that period. If, as Mr. Gladstone said the other day, "surgery began with John Hunter," we may, I think, justly claim that dental surgery also began with him. The knowledge of the dentist was small in those days. His operations were limited to filling cavities in teeth, without having first removed the decay, with lead or gold foil, and we find the quack of to-day has got no further than that. No attempt was made to shape the cavity, or even to dry it; if the filling would remain in the cavity, well and good, if not, the tooth was allowed to go on decaying, and was lost. The

only effort recorded by Hunter to retain a filling by mechanical means is to be found at page 22 of his "Treatise on the Diseases of the Teeth." He says:—"It often happens from neglect, and much oftener in spite of all means that can be used, that the tooth becomes so hollow as to give way, whereby the passage becomes too large to keep in any of the above-mentioned substances (gold foil or lead). However, in this case it sometimes happens that a considerable part of the body of the tooth will still stand, and then a small hole may be drilled through this part, and after the cavity hath been well stopped, a small peg may be put into the hole, so as to keep in the lead, gold, &c. But when this cannot be done, we may consider the broken tooth as entirely useless, or, at least, will soon be so, and it is now open to attacks of inflammation, which the patient must either bear, or submit to have the tooth pulled out." This, then, it seems, was in Hunter's day the ultimate skill of the dentist in filling teeth: drilling a hole and putting a peg through tooth and filling, to keep the two together! Extractions were mostly done with the key or the elevator. Examples of both instruments, in all their hideous forms, may be seen in our museums, and, contemplating them, we may try to realise the torture which patients in those days had to endure. But let us hear what Hunter says about extraction:—"It generally happens in drawing a tooth that the alveolar process is broken, that they (the teeth) are naturally so fast as to require instruments, and the most cautious and dexterous hand. It would be best of all to attempt the extraction of a tooth by drawing it in the direction of its axis, but that not being practicable by the instruments at present in use, which pull laterally, it is the next best to draw a tooth to that side where the alveolar process is weakest, which is the inside in the two last grinders on each side of the lower jaw, and the outside in all the others." Is it any wonder that Duval found enough to fill a volume on "the accidents which happen during the extraction of the teeth"? or any wonder that a horror still lingers round the thought of submitting to "the most cautious and dexterous hand" for the extraction of a tooth? I need not tell you that instead of a fracture of the alveolar process generally happening, it is of rare occurrence with the well-trained dentist. Thanks to Sir John Tomes, Jean Evrard, and others, we have now instruments which enable us to "pull a tooth in the direction of its axis," instruments which are adapted to fit each tooth so accurately,

anatomically, that fracture of the alveolus is more the fault of the user than the consequence of the operation.

In speaking of decay of the teeth Hunter says :—"We have not as yet found any means of preventing this disease, or of curing it." What wonderful progress has been made since Hunter's time. Through the microscope we have become acquainted with the minute anatomy of the teeth and associate parts. By our advance in mechanical skill, and the high development of the use of "the most cautious and dexterous hand," we are able now to cure the disease—not, however, in the way that surgeons cure disease, by removing the diseased portion and allowing nature to do the rest, but by cutting out the diseased portion and substituting a foreign body, such as gold, amalgam, cement, gutta percha, &c., and restoring the form and functions of the tooth. "The most cautious and dexterous hand" has, along with education, been one of the most important means of raising dentistry to the high position which it has to-day attained. No machinery can be produced which will supersede, although it may help, the hand in operative dentistry. Yes, we can cure the diseases of the teeth, and we have found out the causes which produce the diseases, but we are yet unable to *prevent* the diseases. True, some twenty years ago a clever American dentist thought he could do so, and claimed to prevent decay by *anticipating* it. His method was to file away the teeth so as to leave a space between them, but his method, instead of preventing decay, induced it, for the enamel (nature's covering) being filed away, the fermentation of food, the acid secretions from the gums, and other causes soon produced decay in the exposed dentine. Many practitioners in America, and some in other countries, adopted this pernicious practice, the result of which led to much repentance. The pendulum has now swung over to the other side, and the contourist, who follows nature's teaching, produces fillings which knuckle up to the adjoining tooth. Even cantilever fillings have been done (fanciful vagaries) which bridge the space between the teeth.

The science and art of dentistry have drawn so much from the collateral arts and sciences, that a competent dentist may be expected to be well-informed and somewhat practised in surgery and medicine, chemistry, physics, metallurgy, mechanics, electricity, &c. He is not unfrequently called in by the physician or the surgeon to find the cause for symptoms which puzzle him, and which symptoms he suspects to be in some



way connected with the teeth. Affections of the palate, congenital and acquired, of the eye, nose, ear, tongue, throat, stomach, fractures of the maxillæ, and many other troubles are often amenable to the treatment of the skilful dentist. The most perfect artificial restorations of parts of the face, lost by disease or operation, have been done, not by the instrument maker or the mechanician, but by the dexterous hand of the dentist. Our position then, as useful members of a profession, depends not alone on a thorough knowledge of the subjects taught at school or college, but also on the thorough training and high development of touch of the cautious and dexterous hand. The training of the hand can never begin too soon. When a good musician is wanted, training must begin very early in life. Boys who are educated with the intention of entering the medical or dental profession should have special attention paid to the training of the hand. But the training of one hand is not enough; both hands should be well trained. How few operators there are who can extract teeth with the left hand as well as with the right, yet most practitioners will allow that the two-handed operator has the advantage. Let us suppose a case or two in practice. A patient requires six teeth removed from the front in the upper or lower jaw. She will not take any anæsthetic, and we are anxious to get them all removed at one operation. We arrange with our assistant that he shall stand on the right side of the patient, while we take our place on the left; we both operate at exactly the same moment, and keep time; he with his right hand removes the three teeth on the right side, while we with our left hand remove the three teeth on the left side, thus giving the patient no more pain during the removal of six teeth than she would have experienced in the removal of three. Or, to take a very common case in practice, the extraction of two loose teeth. We take hold of one tooth in each hand, and at the same moment remove them both. The patient, thinking only one tooth has been removed, asks if you are now going to take out the other. The next case is one which will try both head and hands. A hypersensitive patient requires some six or eight teeth filled. Erosion has produced such exquisite sensitiveness that all the ordinary remedies for sensitive dentine fail. The cavities extend under the gums; the patient begs to have some anæsthetic administered, and although it is quite an unusual method, we consent to do it. Of course the patient has to be put in a re-

cumbent position. The difficulty of filling teeth in such a position you will no doubt realise. You get no help from the patient; the mouth has to be kept open by means of a gag, the rubber dam adjusted, the gum and rubber dam retracted beyond the cavities, and all to be done *after* the patient has been anæsthetised. The decay is rapidly cleared out by the burring-engine, and the cavities filled. Having to hold your head somewhat over the patient, you inhale a good deal of chloroform, but the ever-faithful, cautious and dexterous hand carries you through all difficulties, and your patient is delighted. You feel in a similar mood, or, at least, you have the satisfaction of knowing you have done a most difficult and trying operation. The patient has felt no pain, had no shock, and would willingly undergo again, at your hands a similar experience. There is yet another trial for your most cautious and dexterous hand in the new anæsthetic position (of the patient) advocated by Dr. Howard, in which the patient's head, as you know, is turned backward and downward over the end of the couch or table. The purpose, I need scarcely tell you, in placing the head in such a position is to ensure the epiglottis being raised, the air passages quite free, the freedom from risk of getting any blood, broken teeth, or instrument, or other impedimenta into the air passages or stomach. Until the hands get somewhat accustomed to operate on a patient in such an unusual position for the extraction of teeth and roots, one feels as if the patient was wrong way up, but a little practice, and again "the most cautious and dexterous hand" will overcome all difficulties.

Filling the teeth of children is now a common and necessary operation, and tries to the very utmost our manipulative power, our skill, patience, and tact. He who can successfully fill the teeth of children is quite fit to operate for adults. Children wriggle so much during treatment, their mouths are so small, they make such ridiculous efforts to see what one is doing inside their mouths, as to make the operation in such cases one of no little trouble and delicacy. Tact and good humour here come into play. If a child has been hurt by some unskilful or unsympathetic operator, its confidence must be regained. An hour spent in doing so is not time thrown away, for the saving, or losing of that child's teeth for life may depend on it. Periodic visits to the dentist are necessary now-a-days, if we wish to prevent toothache or irregularity, and we ought to make it our duty to

instruct the parent or guardian who brings the child, as to when and how the teeth should be cleaned, which are the first and which the teeth of the second set. Very few parents seem to know which teeth of the second set are the first to make their appearance. The six-year molar, if through the gum, ought to be pointed out, and special instruction given to watch those teeth. The six-year molar determines the form and size of the jaw, and if allowed to decay, and extraction has to be resorted to, the expression of the face is altered, the molars behind them (the twelve-year molars) having no support in front, tumble forward and inward, and the result is, in most cases, an imperfect occlusion or articulation. Books of instruction are good, but chair-side teaching is the best. The earlier eruption of teeth of the second set is notable, and has been often mentioned, but our text-books remain the same as they were twenty years ago. Professor Simpson was asked by the librarian of the Edinburgh University to go to the library and pick out the books on his subject that were no longer needed, and his reply to the librarian was this—"Take every text-book that is more than ten years old and put it down in the cellar." Our text-books would be few in number if such judgment were passed upon them. Manual dexterity is first learnt in the work-room, except in the case of those who have a natural gift. If a pupil is not, after trial, clever with his fingers, no matter how clever he may be with his head, he had better seek some calling which requires more headwork than handwork. The dentist does such a great variety of work with his hands, a larger range of work, perhaps, than any other craftsman or artist; in the workroom, modelling in wax and plaster, casting in metals hard and soft, the manipulation of metals for plates for artificial dentures and regulating appliances, the fitting of artificial teeth by grinding, the reproduction of natural forms of teeth and gums in porcelain—perhaps the most delicate and difficult ceramic work which is done—hair-breadth exactness in fitting, artistic arrangement of artificial teeth to give a natural expression, ability to produce the same effect which we see in a cyclorama, viz., the adaptation of the artificial with the real so harmoniously, that the spectator cannot tell where the one begins and the other ends. The Greeks must have possessed this mind-and-hand talent in a very high degree. Manual dexterity enabled them to interpret poetic ideas, and to give to hard stone and metal that beauty of form which is our admiration

and wonder to-day. The mere playing on a pipe gives an apt illustration. On festive occasions in Greece the pipe was held pointing to the right, and on mournful occasions to the left side. Now, to produce music, both hands had to be used; the fingers of the right hand would manipulate the holes at the extremity of the pipe when pointing to the right and, of course, the fingers of the left hand would have to do the work when the pipe pointed to the left, for a Greek would not place himself in an ungraceful position. The painter, the sculptor, and the musician are able to send their souls to their fingers' end, and so should a good operative dentist. What a delightful thing it is to contemplate a symphony in ivory and gold as exhibited in the mouths of some of our richer patients, who come to us for inspection at regular intervals.

Some startling facts are brought out when we go into statistics regarding the amount of precious metals used in connection with dental work. It is estimated, for instance, that at least 30,000 ounces of gold annually are used in filling teeth. If we add to that the gold used in constructing artificial dentures, the platinum, palladium, silver, and other metals, the metallic oxides used in colouring artificial teeth and gums. Miners, smelters, and gold beaters are kept at work preparing metals for our use. In the United States alone there are 15,000 dentists in practice; this year 740 graduates received their diplomas, and 2,105 students matriculated. Germany and France have now their dental departments connected with the universities. In Berlin the Dental Institute was opened five years ago with five students; it now has 200. England, Scotland, Ireland, Russia, and Canada are all preparing students; soon we shall have to add Australia to the list. The dental profession in America, established originally as an independent profession, is now being affiliated with the medical profession; the standard of education is being raised, and a longer term of years is required at college. There is, however, a new trouble springing up in America—they have too many patents; not only are instruments and tools patented, methods and processes are patented, companies are formed to work the patents, and the practitioner finds himself hampered and taxed on all hands. The granting of patents has been a hindrance to the profession instead of a help, has introduced the trade spirit which seeks to benefit itself at the expense of the other members of the profession; while on the other hand the professional spirit, like love, "seeketh not her own, is not puffed up;" she freely gives because she has freely received.

Dentistry shall be just what the members of the profession choose to make it. If the trade spirit is allowed to predominate, it will become a mere money-making handicraft.

What is the British Dental Association, and for what ends does it exist? Is it a mere trade society? Let us recall how and for what it was formed. The diploma committee, after securing the granting of a diploma in dentistry by the Royal College of Surgeons, formed a large portion of the nucleus, which grew into the British Dental Association in 1879. The objects of the Association are—First, the administration of the Dental Act. There can be no question about its desire to do so. From the first hour of its existence it has had that end in view, and has endeavoured to carry out the spirit of the Act, and to administer the letter of the law in such a way as to raise the status of the profession socially and politically, not only in the great metropolis, but in every town and village. It has more than once been a terror to evil-doers, and will continue to be such as long as there are quacks who infringe the Act. The Association holds meetings for the reading and discussion of papers, the discussion of subjects of interest to its members, the cultivation of a liberal spirit, and the dissemination of knowledge and information which may be of value to the practitioner. It publishes a monthly journal. The British Dental Association is at once conservative and liberal—conservative in the true sense, by protecting the public and the profession, as far as its means allow, from the impositions of charlatanism. To the furtherance of this end I would appeal to every registered practitioner to join our ranks, and by his consistent and liberal support, to enable the Association to put the machinery of the law in action against those who continue to degrade the profession by lying advertisements, show-cases, patented processes, dental institutes, and other traps to catch the unwary. It is liberal also, in the true sense, by encouraging an interchange of knowledge and experience, by the reading and discussion of papers, the exhibition of modes of practice, the improvements or invention of instruments and tools, and the encouragement of that spirit of brotherhood which is the true bond of union. Looking back through the ten years of our existence, we must come to the conclusion that the British Dental Association has to a large extent fulfilled the objects for which it was promoted, viz., the education not only of its members but of the public.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

## General Medical Council.

## DENTAL BUSINESS.

Mr. MACNAMARA said he had been asked to bring forward a matter of some importance with reference to gentlemen whose names appeared in the Dental Register. Many of these gentlemen were anxious to get higher qualifications with the object of getting them introduced into the Dental Register, the question that he wished to ask was,

(a) "That whilst recognizing the fact that such are not registrable in the *Medical Register*, he will ask the PRESIDENT whether titles conferred by the several Medical Authorities subsequent to the passing of the *Medical Act* (1886), but not conferred in accordance with the provisions contained therein, said titles being conferred on Registered Dentists only after *bonâ fide* examination, are or are not registrable in the *Dentists' Register* as 'additional qualifications' under the provisions of Clause 6 of Section 11 of the *Dentists' Act* (1878) which runs as follows :—

'The GENERAL COUNCIL may, if they think fit, from time to time make, and when made, revoke and vary orders for the registration in (on payment of the fixed fee by the orders) and the removal from the *Dentists' Register* of any additional diplomas, memberships, degrees, licences, or letters held by a person registered therein, which appear to the COUNCIL to be granted after examination by any of the Medical Authorities in respect of a higher degree of knowledge than is required to obtain a certificate of fitness under this Act.'

(b) "That he will ask, through the PRESIDENT, whether it is, or is not, the opinion of this COUNCIL that, with the object of raising the status of Registered Dentists, facilities should be afforded them of obtaining such additional titles after sufficient examination."

The question resolved itself into this. They knew well enough that if anyone chose to be examined not in accordance with the requirements of the Medical Act (1886) that title would not be entitled to registration in the Medical Register inasmuch as it would not be a qualifying examination in medicine, surgery and midwifery. The first question that cropped up was as to what was meant by a higher title and he insisted on the fact that by higher qualifications was not meant a higher title in dentistry. He could refer members to several instances in the Dental Register in support of his contention. He pointed to the entry of one gentleman who was registered as licentiate in dental surgery of the Royal College of Surgeons in Ireland, and in addition to that were appended the titles of M.D., M.Ch., of the Dublin University. He would have no difficulty in finding others, but that single example was sufficient for his purpose, viz., to show that the higher title was now necessarily one in dentistry. If

these titles were given now they would not entitle the holder to registration in the Medical Register, but they would entitle him to put them in the Dental Register as additional qualifications. He urged that the very lively ambition to have a special qualification in surgery or medicine was one to be encouraged. They would not give the holders the right to practice but would appear as a feather in the cap and in fact as a higher qualification.

With reference to his next question he said he would ask whether it was or not the opinion of the Council that, with the object of raising the status of registered dentists, facilities should be afforded for enabling them to obtain additional titles after special examinations. He pointed out that no matter how high or how severe the examination might be which they might have passed it would give them no right to demand registration in the Medical Register, and therefore could be no title to practice since it would at the best only entitle them to insert it as an additional qualification in the Dental Register. If this could be legally conceded he thought that the desire was a laudable one and one to be encouraged.

The PRESIDENT said the question was a complicated one, but fortunately they had precedents to guide them. There had always been a conflict between the legal opinions obtained as to the right of the Council to act in this matter. The strict legal opinion was that the Dental Register was for dentists only; but on the other hand, and without going into further argument he might say that it had been decided by the Council that additional qualifications might be capable of being put upon the Dental Register; they might be thereby going contrary to the opinion of their legal advisers, still the Council in the exercise of its discretion and in virtue of its powers, had ordered additional qualifications to be put upon the Dental Register. He had again taken legal opinion and again he might state that if the Council had put such qualifications on the Register they had done so solely by reason of their power. Not only had this course been taken with regard to surgical qualifications which might be thought to be more or less allied to the department of surgical dentistry, but it had been done also in respect of medical qualifications in respect of which the connexion was less obvious.

Mr. MACNAMARA was anxious to know whether after an Act of Parliament had been passed which provided that no qualification should be admitted to registration in the Medical Register, unless it was a complete qualification, whether they would admit them as additional qualifications in the Dental Register. He recalled that there was nothing in the Medical Act (1886) which took away the power of the various bodies to grant diplomas, except that one of putting a single diploma upon the Medical Register. For instance, they could not prevent the College of

Surgeons of England issuing their single diploma if they thought fit, although it would, of course, be valueless in so far as registration was concerned ; but it could be granted nevertheless. It remained then to be seen whether that power should be continued and whether the Registrar should be allowed to put such single diplomas as additional qualifications on the Dental Register. He said that they had already exceeded their legal powers, and it remained to be settled where they would draw the line. His own opinion was that the Medical Council having exceeded its powers by putting on the Dental Register qualifications which would confer no status in regard to the Medical Register, they must ask themselves whether this power should be extended so as to include special titles by authorising the Registrar to continue to register additional qualifications on the Dental Register. He then asked the Registrar to read a report which he had drawn up on the subject.

The REGISTRAR read the report which was as follows :—“(a) Acting on the powers conferred by the cited Section of the Dentists' Act (1878), the General Council, on April 28th, 1881 (Minutes, vol. xviii., p. 82), resolved that every registered dentist holding any of the surgical qualifications set forth on Schedule A. of the Medical Act (1858) should have such qualification or qualifications recorded in the Dentists' Register as evidence of the possession of a higher degree of knowledge. Moreover, on July 8th, 1882 (vol. xix. p. 119), this right was extended by the Council to any or all of the qualifications named in Schedule A. of the Medical Act.

“Seeing, therefore, that the entry of such qualifications in the Dentists Register confers no right to practise medicine or surgery, but merely records the possession of a higher degree of knowledge, the provisions of the Medical Act (1886) do not restrain the Council from registering in the Dentists Register the titles specified in this question.

“(b) As to this question, that is put, through the President, to the Council itself.”

The PRESIDENT said that with regard to Mr. Macnamara's second question it must be dealt with by a special motion. It was not for him, as President, to elicit the opinion of the Council on the point which he had raised.

Mr. MACNAMARA said he thought it would be more respectful if he put the question through the President.

Sir JOHN SIMON said it had been resolved that qualifications under Schedule A, possessed by dentists should be inserted in the Dental Register, they being then qualifications to practise, but now that they had ceased to be qualifications to practise he was very doubtful whether this was at all desirable, unless it was a qualification under the Medical Act (1886). He said that if



fragmentary diplomas were to be entered upon the Dental Register, it would produce great confusion in the minds of the public. He thought that it was undesirable to go on perpetuating fragmentary diplomas in any form, and that it would be much better to enact that no diplomas except under the new law were to be admitted to registration even as additional qualifications in the Dental Register.

Mr. MACNAMARA gave notice that he would bring forward a motion on the subject on the following day.

The standing orders were suspended to admit of the completion of the business in hand.

Dr. GLOVER said that in the absence of Mr. Banks he had been requested to ask a question of the President in reference to the alleged frequent admissions to the Dental Register under Clause 37 of the Dentists Act. He pointed out that there were two ways in which a person might obtain entrance to the Dentists Register, one by giving evidence of having passed the qualifying examination for a dentist, and the other under Clause 37 of the Dentists Act. He contended that it was time that this method of obtaining entrance to the Dental Register should be discontinued. It was provided that registration on the ground of apprenticeship should not be continued after 1880 unless in exceptional cases, but he wished to call the attention of the Council to the fact that the registrations under Clause 37 in favour of persons who had no dental education in the present sense of the word were still continuing in considerable numbers, and if his information were correct, with considerable carelessness, but at any rate kindness on the part of the persons responsible for this, though he did not know who really was responsible. He called attention to the fact that the number of persons registered under Clause 37 since 1880 was larger than of regular licentiates, there being only 248 of the latter as compared with 312 of the former. He said that this condition of things excited serious dissatisfaction in the minds of those who had gone through a regular course of training when they saw others admitted to the Register without having gone through any sort of education. Dr. Banks had received letters on the subject from the President of the Irish Branch of the Association, the President of the Scottish Branch, the Central Counties Branch, the West of Scotland Branch, the Midland Branch, &c., and he himself had received several communications on the same subject. He read an extract from a letter addressed to him by the Secretary of the Midland Branch, in which it was urged that there had been ample time for all *bona fide* practitioners under the Act of 1878 to register.

The PRESIDENT said that Dr. Glover was to ask a question and he was waiting to hear what it was.

Dr. LEISHMAN said that he had given notice of his intention to bring forward a motion on the subject.

The PRESIDENT asked what was the question.

Dr. GLOVER said it was to ask by what authority these registrations were made, and after what kind of investigation?

The PRESIDENT requested the Registrar to read the statement that had been prepared on the subject.

The REGISTRAR read the following statement :—" Every application for registration under Section 37 of the Dentists Act (1878) is carefully investigated, and the process of investigation sometimes occupies several months. The applicant is required to furnish, besides other particulars, a Statutory Declaration, taken before a Commissioner of Oaths, embodying all the necessary details of the case : and in this Declaration his master is required to join. A certificate of birth has, moreover, at the suggestion of the British Dental Association, been of late demanded.

" Each such application is considered by the President, and additional information, if deemed necessary, is sought for from the applicant.

" Furthermore, whenever a doubt arises in regard to any legal points in connection with such application, the case is always referred by the President to the Council's legal advisers, and is sometimes also remitted specially to the Executive Committee. An example of this may be seen on page 228 of last year's volume (xxvi.) of the Council's minutes, where it is recorded that, on November 25th, 1889, the Executive Committee directed two such apprentices to be registered.

" Applications under Clause 37 of the Dentists Act are not unfrequently accompanied by recommendations from well-known persons, either registered dental practitioners, or registered persons, medical practitioners, or even by Members of this Council itself, as, for example, one sent in on the 7th of April last, which is still under investigation.

" Vague complaints are sometimes made in regard to these special registrations, and these now and then proceed from a dental practitioner who, having himself been registered in the same way, states that the person complained of knows nothing whatever of dentistry, and goes on to request to be furnished with full particulars in regard to the application of such person. In consequence of the vagueness of such complaints, the President, on December 6th, 1889, found it necessary for the conduct of the business of the office to direct the Registrar to state that if application were made in writing by a secretary or other authorised person on behalf of the British Dental Association, an answer would be sent in each particular case, giving the information desired.

" Accordingly, on February 14th, 1890, in reply to such a request from the Secretary of the British Dental Association, the Registrar, with the President's authorisation, furnished—in regard

to what was considered as a typical case—the fullest information, including even the name of the Commissioner of Oaths, before whom the Statutory Declaration was made; but, hitherto, nothing further has been heard about the case.

“Thus, all possible care is taken in regard to applications under the said Section of the Dentists’ Act, though, in consequence of the framers of the Act having placed no limit of time to such form of registration, such applicants cannot legally be rejected, as, in fact, has been intimated by solicitors acting for certain applicants. For dentists who were in practice before July 22nd, 1878, a distinct limit of time was set forth in the Act; but in regard to these applications under Section 37, no limit whatever is prescribed in the Act.

“Of necessity, by lapse of time these applications are diminished in number. For five months past there have been received no more than ten of any kind; of these four have been summarily rejected, four have been acceded to, and two are still under investigation.”

*Thursday, June 5th.*

Mr. MARSHALL, President, in the chair.

On the motion of Dr. HERON WATSON, seconded by Dr. PETTIGREW, it was agreed, “That the Dental Committee appointed under Clause 15 of the Dentists Act, for the purpose of erasure from, and restoration to the Dentists’ Register, consist of the following members:—The President (Chairman), Sir William Turner, Sir Dyce Duckworth, Mr. Macnamara, Dr. Quain.”

Mr. MACNAMARA moved: That it is the opinion of this Council that, with the object of raising the status of Registered Dentists, facilities should be afforded them of obtaining such additional titles, after sufficient examination, as are mentioned in Sub-section 6, Section 11, of the Dentists Act (1878). He said it was desirable to get in the minds of dentists a wish to obtain higher qualifications than those which entitled them to be put on the Dentists’ Register. They should be encouraged to raise themselves from the mere mechanical to the more surgical aspect of disease. He did not think much argument was necessary to enforce the view that the Council would look with pleasure on anything that would improve the status of the dental practitioner. Several Irish practitioners had got themselves, as it were, out of the ruck. It was a very praiseworthy, laudable ambition to get a qualification entitling him to be on the Medical Register as well as on the Dentists Register, and the Council should encourage that as much as possible.

Mr. CARTER seconded the motion.

Sir WM. TURNER asked Mr. Macnamara how he proposed that the facilities should be afforded for obtaining such additional

titles. He thought that the motion should read that facilities should be afforded by the authorities conferring qualifications.

Mr. MACNAMARA was quite willing to add those words.

Sir WM. TURNER: Does Mr. Macnamara mean Dental Qualifications or Medical Qualifications?

Mr. MILLER: It must be Medical, because the whole thing refers to what has been registered as additional qualifications hitherto, namely, surgical and medical qualifications.

Sir WM. TURNER: Then kindly insert "facilities should be afforded them by the medical authorities."

Sir JOHN SIMON asked if there was any reason to suppose that the Bodies did not afford facilities.

The PRESIDENT said the College of Surgeons would very likely ask the question whether they could really hold such an examination now, but if the Council declared their opinion it would lead the way to their affording such facilities.

The resolution was thereupon agreed to in the following form: "That it is the opinion of this Council that with the object of raising the status of Registered Dentists, facilities should be afforded them by the medical authorities of obtaining such additional titles after sufficient examination as are mentioned in Sub-section 6, Section 11 of the Dentists Act (1878)."

Notice of motion had been given by Dr. LEISHMAN, "That the attention of the Dental Committee be called to the frequency with which the names of certain persons are still entered on the Dentists' Register under Section 37 of the Dentists Act (1878)."

The PRESIDENT said he wished to explain that the purposes for which the Dental Committee were appointed did not include this function. They were appointed for a special purpose, and they could not undertake other duties.

Mr. MILLER said they were appointed for a special purpose, which was set forth very clearly in the Dentists Act.

Dr. GLOVER hoped that the consideration of the matter would be deferred until the next day.

Dr. LEISHMAN: Do I understand that this is incompetent as a motion?

The PRESIDENT: I think so. That is my impression.

Dr. LEISHMAN: Is it competent to move that a certain question relating to dentists may be remitted to the Dental Committee for consideration?

Mr. MILLER: The Committee is appointed for a special purpose in respect to the erasure of names from the Dental Register.

Dr. LEISHMAN: Then alter it to the Executive Committee, and I give notice of that for to-morrow.

*Friday, June 6th.*

Mr. MARSHALL, President, in the chair.

Dr. LEISHMAN, in moving "That the attention of the Executive

Committee be called to the frequency with which the names of certain persons are still entered on the Dentists' Register under Section 37 of the Dentists' Act (1878)," said that this subject had been brought under his notice by several members who occupied a high position in the dental profession, and who were all gentlemen who had gone through a curriculum, and passed an examination, and who had become somewhat impatient that the operation of certain clauses of the Dentists Act should cease. He was quite aware that the Council had no power to say that this action was to cease, and he would not now bring it under the notice of the Council if he had not what he believed was clear evidence that there had been a great amount of fraud and wilful misrepresentation. Men's names under Clause 37 had been put on the Dentists' Register on false evidence and false affidavits. The curious thing was that this was a clause by which it was made possible under the Dentists Act, which said: "Any person who has been articled as a pupil and has paid a premium to a dental practitioner entitled to be registered under this Act, in consideration of receiving from such practitioner a complete dental education shall, if his articles expire before the first day of January, 1880, be entitled to be registered under this Act." His indentures, therefore, ought to have terminated on January 1st, 1880. One would think that ten or twelve years after the passing of the Act the number of these men would be dwindling away, more especially as the longest term of apprenticeship in such a case that he ever heard of was seven years. Twelve years had passed, but he was told that last year there was a considerable increase in the number of men who presented themselves for registration under the clause. He knew himself of several cases of men who could not by any possibility be described under the terms of the first paragraph of the clause—men who were simply workmen, but who, somehow or other, managed to get themselves interpreted as apprentices. One case was very striking. He had the real initials, and from the date he could identify the individual on the Register. He would call him A. B. He was admitted to the Register in 1888 under Clause 37 of the Dentists Act of 1878. He was apprenticed in a town in an eastern county after the passing of the Act. Then the first step towards registration was that he applied for it and was refused, but on what ground he (Dr. Leishman) was not informed. Then on further application by a solicitor the Dental Committee decided to consider the matter on an affidavit by the man to whom A. B. was apprenticed. He declined to make the affidavit, having already dated back the indentures, and regretted it, and he was afraid of getting into trouble if he made an affidavit. Finally A. B. was accepted upon an affidavit that his master would not make an affidavit. He (Dr. Leishman) knew something of the class of men who had gone

on the Register under this clause, and it was strange that the numbers were so large after twelve years. Gentlemen who had got to the position of dentists on the higher level were very much annoyed, and looked to the Council, with some show of reason, for some sympathy. They would be pleased to know that the Council would turn attention in this direction, and do something to prevent the evil. He believed they had a most substantial grievance.

Dr. GLOVER seconded the motion. The President was kind enough to give an answer to his question, and to say that by lapse of time these applications were diminishing in number. Last year there were twenty-nine, the year before twenty-four, the year before only nine. In the last three years there had been sixty-two; in the previous three years fifty seven, so that the process of diminution was not going on so fast as could be wished. The President also said that every application was most carefully investigated. That, he was sure, was the intention, but the cases showed that the amount of attention was insufficient to detect serious defects. Following Dr. Leishman's example he would not mention names, but he would give a second example. The man and the master had both sworn to the facts. The facility with which certain facts were sworn to was very painful. It was even possible to get man and master to swear to things that did not bear investigation. Then it might be said that additional information was got from the applicant, but the applicant was an interested party, and if he had made up his mind to it he went on giving information. Then it was said if there was any doubt the Committee applied to the legal adviser of the Council. On page 228 of the volume for 1889 it was said, "Read application from two apprentices, with opinions from the Council's legal advisers to the effect that, although it is doubtful whether these applicants have a right to claim registration, the Executive Committee has in such cases power to make direction for registration." There the legal advisers were evidently against the registration, but the Executive Committee were of very kindly mind, and seemed to be generally inclined to yield. One sentence there was that much dissatisfaction arose from rival practitioners. He thought that was an unhappy phrase. One case was that of a man who at the time of his application was a joiner, and still was a joiner. When he applied for registration he was fifty years of age, while the master when he assumed that position was of the ripe age of eighteen years. He had now slipped off the Register and was in the occupation of a driver of a tram-car, no doubt being engaged in a business for which he was better fitted. Mr. Miller had addressed several letters to him, but happily he was too busy to answer them. He (Dr. Glover) was informed that the President was warned of these facts before registration was effected.

The PRESIDENT: Will you give the date of that case?

Dr. GLOVER said the man was registered in 1889, but he did not wish to give particulars, as his object was not personal. He did not know that he need say more, having, he thought, said enough to show that this state of matters must be remedied. Dr. Leishman's notice seemed slightly inadequate—just enough to direct the attention of the Executive Committee to the serious nature of some of their admissions to the Register, but he would not ask for any addition to the motion at present. He suggested that the members of the Council should have time to make enquiries before the registration was actually granted.

Sir W. FOSTER said the Council generally erred on the side of good nature. Some time ago he wrote to the Registrar about a case of this kind, and in the future he should be very careful about recommending anybody for the Dental Register who had not gone through the curriculum. No doubt they all had confidence in the carefulness of the Committee, who, while careful in the past, would be still more so in the future.

The PRESIDENT said he had not the smallest objection to passing the resolution; on the contrary, he should be exceedingly pleased. Of all the unpleasant duties he had to perform these were the most unpleasant. He could give no answer with regard to the cases that had been mentioned, because he had not investigated them. He had, however, investigated each individual case as it came before him, and had obtained the information which the rules required him to. What more could he do? Was he to constitute himself as a kind of detective policeman? Was he to send round and ascertain whether this man or that was actually declaring a falsehood? There was a remedy. If the Dental Association showed clearly that some false statement was made, of course action could be taken. As to the proposal that these things should be submitted to individual members of the Council, he was quite sure that without a great deal of trouble they do not get better information than they received now. They must take documents as they appeared on the face of them. If a man declared he was able to be a master at the age of eighteen that was his fault. The advantage the Dental Association had over the Committee was that they searched the record and tried to find out something after the man was let in. There was an *ex post facto* examination. The Committee were entrusted with certain powers, and they faithfully carried them out, but if the Council wished anything more to be done he did not object. There was nothing like negligence on the part of the Committee, and sometimes they took legal advice as to their actual position. If they were cheated there was a mode by which punishment could be secured, but if the Executive Committee were expected to examine into all these cases the

Council must be prepared for a sitting of the Executive Committee to last four days or a week. He could see no objection except on the score of expense.

Dr. LEISHMAN said his object was simply to get the matter looked at by the Executive Committee, in order to ascertain if there was any better way of managing these things. If the gentlemen who had dental qualifications were aware that the Council took some interest in their affairs it would help them considerably.

Dr. HERON WATSON said that in some cases, at all events, the Dental Association had proved that certain persons had given false affidavits. The best thing for them to do was to bring a few prosecutions, which would do a great deal of good. It was impossible for the President or any member of the Executive Committee to do it.

The motion was agreed to.

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### The Odontological Society of Great Britain.

THE Ordinary Monthly Meeting was held at the Society's Rooms, 40, Leicester Square, on Monday, June 2nd., Mr. FELIX WEISS, L.D.S., President, in the chair. Present a good attendance of members and some visitors.

The minutes of the preceding meeting having been read and confirmed, Messrs. Rilot, Greenfield and Butcher signed the obligation book, and were admitted members.

Mr. Bateman was elected a member of the Society.

The PRESIDENT then called the casual communications, and Mr. Sydney Spokes narrated the particulars of a case of faulty development of enamel.

Mrs. L., æt. twenty-five, married, sought advice on account of her "brown teeth." A central incisor in both the upper and lower jaws had been recently removed in connexion with necrosis of the alveolar process. The four first permanent molars had also been lost. All the remaining teeth were brown in colour, the upper ones being darker than the lower. The colour appeared to be the result of faulty construction and distribution of the enamel. The approximal surfaces were carious. The upper teeth were removed with the view of fitting artificial ones. In ordinary cases of defective enamel transverse grooves are seen across the teeth, marking the period when the development of the tissue was materially interfered with. In the present case the grooves are in the long axis of the teeth, showing that the process was interfered with during the whole of the period of calcification. There was a total absence of enamel in some places, the exposed dentine having apparently proved sufficiently hard to survive in spite of the absence of the protective enamel. Elsewhere the



enamel occurred in irregular masses. A transverse section through a bicuspid showed the transverse striation of the enamel prisms to be plainly apparent, while spaces or channels existed in the long axis of the tooth, which were in spaces connected by transverse branches mapping the tissue out into arece. The family history of the patient revealed that the "brown teeth" were hereditary, and had appeared through several generations. Both temporary and permanent sets were "brown." They were not so dark when first erupted, but became worse as they grew older, in some cases becoming "almost black." In reply to questions Mr. Spokes stated there was no doubt that the condition to which he referred was one affecting the deeper surfaces of the teeth, and not to be accounted for by mere surface staining.

Mr. ALFRED SMITH read notes of a case of successful removal of an epulis and described and demonstrated the action of Paquelin's benzine thermocautery. The patient was a girl aged nineteen, and was seen in August, 1889. An epulis was found growing from between the left upper central and lateral incisors, being as large as a filbert. In 1887 it was first seen, and in the following year it was excised at a hospital. It, however, recurred in January, 1889, and the surgeon told her it would be necessary to remove the adjoining tooth. To this she refused her consent, and allowed the epulis to grow untouched till August, 1889. As the patient still objected to losing a sound tooth, it was decided to remove the growth by Paquelin's thermocautery, and this was successfully accomplished. The wound healed up in a fortnight, and up to the present time no recurrence had taken place.

Mr. DENNANT (Brighton) showed an instrument which he called an iodine dresser. It was intended to facilitate the application of iodine to the gums, and consisted of a small stem of black vulcanite with a slot at the top end, into which a little wool can be twisted. This could be dipped into the iodine and accurately applied to the gum without soiling the fingers or damaging metal instruments. The cost was so slight that patients could be presented with an "iodine dresser" for their own use at home.

Mr. BRUNTON suggested that the staining of iodine could be avoided by the use of iodium decoloratum, which was absolutely free from coloration.

Mr. WALTER COFFIN thought Mr. Dennant's contrivance would prove more serviceable if bent at an angle.

Mr. ROBBINS and other members spoke in favour of the use of a common match end as an iodine carrier and Mr. BETTS pointed out that one great advantage of it was that it was sure to be thrown away when once used, whereas the vulcanite instrument however cheap might tempt a patient to retain it after once using it.

Mr. BRUNTON (Leeds) showed various ingenious contrivances. Firstly, he showed some bleached rubber dam, made by soaking the ordinary rubber in cold water and wrapping it up. When dry it

was white and remained so for some time. Secondly, he passed round a small astringent pad intended to apply to the saliva ducts to check that secretion during a dental operation. He used "chloralum" and found it would check flow of saliva for a couple of hours and thus permit him to work without the use of the rubber dam.

Mr. Brunton also demonstrated some cutters for running round crowns and trimming roots for pivots. To prevent soiling a patient's dress with a syringe Mr. Brunton had made a bent glass shield, through which he worked his syringe. He also showed a form of mouth mirror into which he could himself cement glasses, the mirrors were oval, a shape he preferred, and were arranged so as to have an attachment which kept down the mouth piece and saliva ejector, when working on the lower jaw. Mr. Brunton also exhibited some rouge discs for finishing gold fillings, made of French paper called "rouge paper," and were made by glueing the backs of the paper together with shellac. Lastly he showed models of cases taken from the mouth. One, a syphilitic case showed Hutchinsonian teeth; another remarkable spreading of the molars in the upper jaw, which were outside and overspread those in the lower jaw; and the last one showed six deciduous incisors in the upper jaw.

Dr. J. F. W. SILK then read a paper upon "An Analysis of One Thousand Nitrous Oxide Administrations recorded systematically." He insisted upon the importance of clinical observations to supplement the physiological researches which had been made about nitrous oxide gas. To do this it was important to keep systematic records of all cases upon some given plan. Dr. Silk exhibited a tabular form he had had printed, which gave various headings, under which notes could be made descriptive of the various phenomena liable to occur under the gas. Having employed this form for some while Dr. Silk had tabulated the results arrived at in one thousand cases. The table contained the following headings:

I. GENERAL SUMMARY.—Sex, age, physical state, consecutive administrations, gas used, time, methods.

II. PHENOMENA.—Respiratory, circulatory, muscular, nervous, digestive, urino-generative.

III. AFTER EFFECTS.—Immediate, remote.

The average age was 24.18, most patients being between fifteen and forty-nine, while 760 patients were females to 240 males.

*Physical and mental states before the administration.* In twenty-one instances neurotic troubles (conditions other than simple nervousness) existed. In two there was a family history of insanity, and the administration gave trouble and hysterical phenomena were evoked as the patients became conscious. In one case an elderly man who had been an inmate in a lunatic asylum, marked rhythmic movements of the limbs occurred. In an old hemiplegic female similar movements occurred in the affected arm, and this member felt "hot and congested"

throughout the day. The subjective feeling of vascular dilatation might, Dr. Silk thought, be clinical evidence of the true dilatation of the vessels in the nervous system first pointed out by Dr. Dudley Buxton. In three cases persons subject to epileptiform fits were placed under gas. A girl æt. eighteen on one occasion showed tendency to opisthotonos, on the second occasion she felt the characteristic "aura" but no fit was developed. A woman twenty-five to thirty (?) the jactitation was very marked and amounted almost to a convulsion (nerve storm). Four cases of phthisis gave no peculiar symptoms. In the cases of valvular disease of the heart one is noted as having given signs of syncope, undue lividity also occurred with intermission of the temporal pulse. Referring to the statements of M. Laffont that nitrous oxide is dangerous to women during pregnancy, and to diabetics, Dr. Silk stated that his experience was not in harmony with that writer's observations, for he had administered the gas to nine pregnant women, without any untoward results. Hysterical crying was, however, more marked in these persons.

Of cases in which more than one administration of gas was given to one patient at short intervals of time (consecutive administrations), some interesting particulars are given. In 12 per cent. retching occurred, in two cases (out of sixty-five cases), actual vomiting was excited. In two cases respiratory troubles occurred, and it became necessary to pull forward the tongue. In 9 per cent. there was marked hysterical crying and screaming. In 293 cases an average of three gallons of gas was given, but Dr. Silk's subsequent experience led him to think this was too little. Dr. Silk came to the conclusion that 67.5 seconds was the average time taken in producing anæsthesia, but found both the time occupied in the induction of anæsthesia and the time during which anæsthesia persisted varied within very wide limits.

The conjuncional reflex was not, the lecturer thought, reliable either as an indication of the presence or absence of anæsthesia. Experimenting with a supplemental bag Dr. Silk was led to believe that unpleasant after effects were more prone to occur with its use, but anæsthesia was induced sooner when it was employed.

Referring to the phenomena occurring under the gas, it was stated that the pulse showed general acceleration, loss of tidal wave, accentuation of the dicrotic curve and increase of the heart force. These results agreed with those arrived at by Dr. Dudley Buxton and published in the Transactions. "Rhythmic movements" of the limbs as opposed to jactitation occurred in twenty-seven cases, but it was at present not easy to explain their mechanism; it was found that some persons especially in one case which was cited showed a marked tendency to opisthotonos and this quite irrespective of very profound anæsthesia.

In referring to the condition of the pupils it was stated that although

usually asserted to be widely dilated under nitrous oxide, yet Dr. Silk had found that in a percentage of cases this dilatation did not occur. In sixty-four cases the average size before administration was 3.64 m.m. at the height of narcosis 5.5 m.m., showing an average dilatation of 1.86 m.m. Non-dilatation occurred in 194 cases and most of these were instances when pure gas was given; and when the persons were over fifty years old. Micturition during unconsciousness occurred in ten cases in each case in women and children. Erotic manifestations are recorded in six cases.

The so-called intensification of stertor after removal of the face-piece was noticed in fifty cases. Of remote effects none in 42 per cent., and slight transient headache in 15.5 per cent. In many instances more marked *malaise* was reported as occurring upon the second day after the administration.

Mr. HUNT (Yeovil) in opening the discussion mentioned the frequency of unilateral lacrimation which he regarded as due to action of the sympathetic nerve on that side; he asked whether there was unilateral alteration of the size of the pupil.

Mr. WALTER COFFIN thought the question as to variation in the size of the pupil would be affected according as the patient was instructed to keep his eyes fixed on a given object or was permitted to keep them closed. He also remarked the statistics about micturition would be greatly affected by the routine practice which so many followed of instructing persons to void that viscus before taking gas.

Mr. MATHESON who had courteously given precedence to Dr. Silk, as a visitor and requested his paper might be taken before his own, here begged the President to say that considering the importance of the subject and the number of persons present who were competent to speak upon it, he was perfectly willing to forego reading his paper in order that the discussion might be taken in full upon Dr. Silk's communication.

After some remarks from the President and Mr. Brunton this course was adopted, and

Mr. WOODHOUSE BRAINE continued the discussion. After referring to the onset of delusions occurring after ether inhalation, he mentioned having administered nitrous oxide gas to a boy whilst the latter was in an epileptic fit. He thought that course of action was as a rule safe, and the best to pursue. The "intensification" after removal of the face-piece was, he believed, usually due to mechanical causes, the pushing back of the tongue by the finger of the extractor. Mr. Braine deprecated the practice of repeated administrations at one sitting, as he had found a second dose, although safe, yet induced unpleasant after effects. The so-called rhythmic movements were often the persistence during unconsciousness of voluntary movements made by patients with a view of informing the anæsthetist that they were still conscious. It was a mistake to let patients indulge in such move-

ments, as they were liable to become very violent indeed when the patients were deeply under the anæsthetic.

Mr. G. H. BAILEY felt that in extensive practice there would be no slight difficulty in keeping up full records of the cases observed, and frequently the patients would be either unable or unwilling to give the information required. In hospitals this could be done, and he felt strongly that more careful records of the gas cases should be kept. He concurred with Mr. Braine in regard to the safety of nitrous oxide for epileptics. In extracting teeth from the lower jaw the operator often pushed back the tongue, and so asphyxiated the patient, but Mr. Bailey had in such cases found that as soon as the mouth prop was removed the patient came round, and he deprecated the employment of tongue forceps in such cases as unnecessary and injurious to the tongue. Dilatation of the pupil he believed always occurred when complete anæsthesia was reached, and he (Mr. Bailey) never regarded even the widest dilatation as a sign of danger, but rather as that of profound unconsciousness. The period of persistence of anæsthesia was usually twenty seconds. The quantity of gas Dr. Silk considered enough for a patient was, Mr. Bailey thought, astonishingly small. Without being very extravagant, he always used about seven gallons per head, and did not deem this any too much. Opisthotonos was very rarely met with, except in children; men occasionally became violent as they resumed consciousness. Mr. Bailey had never any anxiety about patients with heart disease as subjects for nitrous oxide, he found they took the gas as well as any one else.

Dr. DUDLEY BUXTON, in rising to make a few remarks on what had fallen during the discussion, felt that anything like a critical review of Dr. Silk's interesting and valuable paper was at that period of the evening an impossibility. He had had some experience of epilepsy and insanity, and had come to the conclusion that both epileptics and the insane took nitrous oxide as well as other persons. Several cases had been reported by Dr. Savage, of Bethlehem Hospital, and others, of patients who had after taking anæsthetics had outbursts of mania. No case of this sort had occurred in Dr. Dudley Buxton's practice. With regard to epileptics, he had not found nitrous oxide by any means necessarily determined a fit. In a number of cases of patients of his colleague, Mr. Victor Horsley, in which some brain lesion caused epileptiform convulsions, he had given gas as a preliminary to another anæsthetic, and only in one case had a seizure occurred during the administration. Upon this occasion, Dr. Dudley Buxton continued the administration, and no untoward effects resulted. He inquired whether Dr. Silk's statistics were taken from hospital or private patients, as he found the two classes of people behaved very differently, and showed very different after-effects; nervous symptoms, &c., were developed far more in hospital patients, so that he contended it was important to separate them in tabulating results.

He differed from Mr. Bailey about there being a difficulty in obtaining reliable particulars about private patients, and thought a little tact and management would, as a rule, succeed in eliciting them. Dr. Dudley Buxton spoke strongly in favour of nitrous oxide gas as an anæsthetic in heart disease, and believed that valvular disease was no contra-indication to its employment. The only cases in which he felt there might be danger were those in which extensive degeneration of the heart-muscle existed, and even in these he believed the shock of an operation, however trifling, was more to be dreaded than the anæsthetic.

Dr. SILK having replied, the PRESIDENT announced that the next meeting of the Society would take place in November, when Mr. Leonard Matheson would read his paper adjourned from that night, and Mr. Storer Bennett would also read a paper, "A Description of some interesting Specimens of Comparative Pathology at present in the Museum."

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In our report of the last meeting of the Society reference was made to Mr. Salter's statement that many young and apparently healthy pulps show numerous deposits of secondary dentine which he regards as a reparative process, while Mr. Mummery was stated to believe that when this occurs it is consecutive to injury or irritation. Mr. Howard Mummery's meaning is not rendered clearly; what he said was: "I have been struck with the fact pointed out by Mr. Salter in his Dental Pathology—that many young and apparently healthy pulps show numerous deposits of secondary dentine. Mr. Salter in the work referred to, p. 139, says: 'The change is, to a great extent, reparative and the result of trivial causes, but I believe it never occurs unless the pulp has been in some way the subject of injury or irritation.' The specimens in which I have seen it were certainly untouched by caries, but they may have been subjected to some form of irritation conveyed to the pulp from the great pressure caused by overcrowding."

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### Dental Hospital of London Athletic Club.

THE Third Annual Dinner of the above Club was held at the Holborn Restaurant on Saturday, May 31st, the chair being taken by Mr. J. SMITH TURNER. Amongst those present were Drs. Miller Parfrae, Buxton, Hewitt, Messrs. Morton Smale, R. W. Turner, A. S. Underwood, David Hepburn, Woodhouse, Gregson, Read, Canton, Paterson, Ackery, Ash, Woodruff, Biggs, Bacon, Braine, and others. The evening was entirely of a pleasant and social character, the musical arrangements being undertaken by the Musical Society of the Hospital.

The usual loyal toasts having been given from the Chair and duly honoured, the CHAIRMAN proposed the Dental Hospital Athletic

Club, and in the course of his speech alluded to the difference between Greek, Roman, and modern athletics, and to the great influence sport brings upon our moral and physical welfare, pointing out that this was especially the case with the dental practitioner. In giving the toast, he coupled with it the names of the energetic Secretaries, Messrs. Forsyth and Preedy.

Mr. PREEDY, in replying, referred to the healthy condition of the Athletic Club, financially and otherwise, remarking that during the past year all branches had done excellent work, the cups in football being won by Messrs. Roberts and Pearse, the tennis racquet by Mr. Bull, the bats by Messrs. Forsyth and A. R. Colyer, and the ball for bowling by Mr. Dormer.

In conclusion he thanked the members of the Staff for the hearty and generous support they always gave the Club, and also for their presence at the dinner.

The toast of the Staff of the Hospital was proposed by Mr. TOMES and replied to by Mr. MORTON SMALE; that of the Visitors by Mr. R. H. WOODHOUSE, responded to by Mr. R. W. TURNER; and last, but not least, that of the Chairman by Mr. DAVID HEPBURN.

After this toast the company sang "Auld Lang Syne," and thus brought the evening to an appropriate conclusion.

## MINOR NOTICES AND CRITICAL ABSTRACTS.

### The Approaching Election at the Royal College of Surgeons of England.

AT the election of members of Council of the Royal College of Surgeons on July 3rd, there will be three vacancies to be filled, caused by the resignation of Messrs. Croft, John Marshall, and Power. For these there will be several candidates, and the names of seven who are expected to apply are already mentioned: Mr. W. Mitchell Banks (Fellow, 1869), Mr. Marcus Beck (Fellow, 1869), Mr. Edward Bellamy (Fellow, 1867), Mr. R. Brudenell Carter (Fellow, 1864), Mr. John Langton (Fellow, 1865), Mr. Walter Rivington (Fellow, 1863), and Mr. Lawson Tait (Fellow, 1871).—*The Lancet*.

### Royal College of Surgeons in Ireland.

THE election of President, Vice-President, Secretary and Council, took place on June 2nd. The two candidates for the presidency were the Vice-president, Mr. H. Gray Croly, and the outgoing President, Mr. Austin Meldon, the former being elected by a majority of 37 votes. The new President, Mr. Croly, is a most distinguished surgeon, and in every way fitted to fill the high position to which he has been elected by the Fellows. He is senior surgeon to the City of Dublin Hospital, consulting surgeon to Monkstown Hospital, ex-President of the Irish Medical Association, &c. A contest also took place for the

vice-presidency between Mr. Moore and Mr. Carte, J.P., the latter being successful by 20 votes. Mr. Colles was re-elected Secretary without opposition, and the only addition to the Council was the name of Dr. C. Ball, who fills the vacancy caused by the retirement of Mr. Robert Moore. There were 242 votes recorded at this election, being one more than at last year's election, three being spoiled votes. The result of the election for President and Vice-president having been declared, Dr. Jacob (Maryborough) proposed a vote of thanks to Mr. Meldon for the able and dignified manner in which he filled the office of President during the year. This was seconded by Mr. Wheeler, and adopted amid applause.—*The Lancet*.

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### Additional Qualifications for Dentists.

WHEN the Dentists' Register first appeared no other qualification than the L.D.S. was admissible, but subsequently medical and surgical degrees were inserted as "Additional Qualifications," though not as substitutes. Mr. Macnamara, at a meeting of the General Medical Council, now seeks to enable dentists to register as an additional qualification a single medical or surgical diploma, notwithstanding that such diploma of itself would not be eligible for the Medical Register. He said, "for instance they [the Medical Council] could not prevent the College of Surgeons of England issuing their single diploma if they thought fit, although it would of course be valueless as far as registration is concerned," and he suggested that such a diploma should be granted and registrable. This seems to us most undesirable. The dentist himself would be in an anomalous position: he would have a medical diploma for which he had passed an examination, and yet not have the right to practise. The medical practitioner sees no reason why the dentist should be allowed to obtain a medical diploma under more favourable conditions than himself, and, as Sir John Simon pointed out, it would increase the confusion in the minds of the public as to the meaning of qualifications. Mr. Macnamara wishes every facility and encouragement given to dentists to become medical men proper, and in this we cordially agree; but they must not be medical in name only. The facilities afforded by the Royal College of Surgeons of England by their new regulations enable the dental student to take the conjoint diploma and the L.D.S. with no great difficulty.—*The Lancet*.

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### Sudden Death from Chloroform.

THE subjoined account is taken from the *New York Tribune* of May 4th, 1890. One curious feature in the account is that the chloroform was given for the removal not of a tooth but of a filling.

Mrs. Kate Harper, wife of William A. Harper, of the publishing firm of Harper Brothers, and daughter of Colonel H. B. Beecher, son of Henry Ward Beecher, died suddenly at Yonkers on Friday morning. Mrs. Harper went to Yonkers a few days ago to spend the summer with her father. Early on Friday morning she complained of toothache, which had troubled her for some time. Colonel Beecher sent for Dr. Underhill, a dentist, and Dr. Phillips, his family physician, to relieve her of the pain. As Mrs. Harper insisted upon using chloroform, the doctors used the drug. The filling was then taken



from the tooth and the pain stopped. Soon after reviving, however, Mrs. Harper had a fit of vomiting. Suddenly she dropped back upon the sofa where she was sitting, and died in a short time. It is supposed that she ruptured a blood-vessel of the heart.

As soon as Dr. Phillips saw that Mrs. Harper was unconscious, he called in Drs. Hermance, Sherman and Moffat, but when they arrived they found the young woman dead.

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### May Sunshine in 1890.

THE amount of sunshine in the unusually brilliant month recently ended has naturally been the subject of general comment, and it has been noted that at Eastbourne 266'9 hours of bright sunshine were recorded in May, exceeding the average for the corresponding month in the preceding five years by more than forty-five hours. It may, however, be pointed out that even at the Royal Observatory, Greenwich, well within the zone of London smoke, the recorded amount of bright sunshine was 223'9 hours and was equal to more than 47 per cent. of its possible amount—that is, of the hours during which the sun was above the horizon. This amount at Greenwich exceeded the average amount in the corresponding month of the previous ten years by more than forty-one hours; and since 1877, when the amount of sunshine was first recorded, has only been once exceeded—namely, in 1882, when the May recorded was 237'8 hours.—*The Lancet*.

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### OBITUARY.

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#### W. A. Turner, L.D.S.Eng.

WE regret to announce the death of Mr. W. A. Turner, partner of Messrs. Carter, of Leeds, which took place at the Grand Hotel du Louvre, Paris, on the 18th May. He started for a continental trip some ten days previously, and caught a chill while crossing the Channel, which resulted in pneumonia and terminated fatally. His brother was with him, and brought the body back to England. He was buried in his native town of Chichester on Monday last. He was L.D.S.Eng., and his name will be especially familiar to our readers by his association with the recent hypnotic experiments which have been reported in our pages.

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#### David Fletcher.

WE also regret to learn of the sudden death of Mr. David Fletcher, of Wynyard Square, Sydney, where he had been in practice for the past thirty-five years. He was highly respected by all with whom he came in contact, and his memory will be cherished by a large circle of friends, among whom is the Premier, Sir Henry Parkes, who had been intimately acquainted with Mr. Fletcher for nearly forty years, and who held him in warm regard.

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THE JOURNAL OF THE  
NEW INVENTIONS.

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**Caffyn's Liquor Carnis.**

SEEING that as a profession it is specially our business to superintend the organs concerned in the first stage of the process of alimentation, it very frequently falls to our lot to be asked about the merits of the various preparations of food stuffs which are devised by modern science to meet the case of those who are unable from physical causes to take food in the ordinary form and manner. The preparation under notice is one which no one need have any hesitation in recommending to his patients: it is fairly pleasant to taste and keeps well (if kept in a cool place); it is rich in albumenoids, and contains a large proportion of soluble phosphates, thus providing for bone and other tissue formation. (These facts are vouched for by no less an authority than the head of the laboratory of University College.) It has been submitted to several eminent analytical authorities and has received commendation at their hands, and should prove a very valuable addition to our scientific resources, for, as our contemporary, *The Lancet*, puts it, while reviewing this preparation, "what we want is not so much new medicines as new foods."

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**Savory and Moore's Food for Infants.**

THIS preparation has for a long time, more than a quarter of a century, occupied a good position among kindred preparations. Of course, on the nature of the food that is supplied to infants the formation of their dental armature greatly depends. The albumenoid substances are not peptonised or pancreatised so that the juices are required to perform their functions so far, and the glands do not consequently run a risk of atrophy from idleness. The most important feature in this food, from our point of view, is, the retention of the phosphates of the wheat and malt elements, which are sometimes removed in the preparation of food stuffs to the great detriment of the preparation as a factor in tooth formation.

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OWING to the pressure upon our space we regret we are compelled to postpone the microscopical items until next month.

## ANNOTATIONS.

A CONSIDERABLE portion of the time of the General Medical Council, at the recent meeting, reported at another page, was taken up with the discussion of registration, under Clause 37 of the Dentists Act. The discussion had its origin in representations which had been made by the Presidents of Branches of the British Dental Association. The official reply seems to contain a sufficient vindication of the action of the Council in its dealings with applicants for admission under the Clause; the law appears to have been scrupulously carried out. At the same time there can be no doubt that the practical result of this discussion will be good, for it cannot help leading to a tightening of the official hand on the handle of this particular door. It is perhaps within the knowledge of some of our readers that an apparently rather flagrant case of the kind is under the consideration of the legal advisers of the Association, at any rate it will be a source of satisfaction to those who did not know it to learn that it is so.

NEXT month we propose to allude at greater length to the coming annual meeting. At present we must content ourselves with urging upon the notice of our readers that altogether we anticipate a good gathering in every respect. One cause for anxiety exists, and that, we hope, will speedily be removed; we allude to the absence at present of any promises of papers. The Hon. Secretary will be very glad to receive speedy information regarding papers that may be in process of preparation, to be read before the meeting.

ROYAL COLLEGE OF SURGEONS, ENGLAND.—At the recent sitting of the Examining Board the following gentlemen passed the necessary examinations and were admitted Licentiates in Dental Surgery:—Walter Russell Barrett, York Place, Portman Square; Herbert Richmond Bowtell, Richmond Road, Hackney; Ernest Henry Lewis Briault, Richmond Crescent, N.; Arthur John Cardell, Victoria Road, Clapham Common; Henry Charles Carter, Edgware Road; Arthur Brooks Cox, M.R.C.S., Middlesex Hospital; Ernest C. Davids, Montmouth Road, Bayswater; Arthur Holmes Derwent, Park Terrace, Moss-side, Manchester; Howard Little Hayman, Clevedon, Somersetshire; George Hern,

Hamilton Road, Ealing; Augustus William Hoffman, Wistinghausen, Beauclerc Road; Joseph Brookhouse Horden, Leamington Spa; William Draper Moon, Newman Street; John Percy Oliver, Queen Street, Cardiff; Edward John Preedy, Camden Road; Sibley Walter Read, Finsbury Square; Stanley Read, Old Stein, Brighton.—*The Lancet*.

We are gratified to find amongst the names of the gentlemen who passed their first professional examination in Anatomy and Physiology for the Diploma of Fellow of the R.C.S.Eng. at the last examination, that of J. G. Turner, a student at the Dental Hospital of London.

At a Congregation held in the Senate House at Cambridge on June 10th, the honorary degree of LL.D. was conferred upon Sir Andrew Clark, Bart., F.R.S., President of the Royal College of Physicians of London, and Mr. Jonathan Hutchinson, F.R.S., President of the Royal College of Surgeons of England.

GUY'S HOSPITAL DENTAL SCHOOL.—Analysis of operations and attendances, October, 1889 to May, 1890:—

	1889			1890				
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Extractions without } anæsthetics ... .. }	267	295	221	334	270	303	383	390
Extractions under } anæsthetics ... .. }	83	201	69	129	255	242	161	250
Gold Fillings ... ..	12	16	14	25	53	58	37	71
Other Fillings ... ..	57	48	57	90	124	185	129	173
Cases treated me- } chanically ... .. }	6	10	11	21	14	20	15	35
Scaling ... ..	3	6	10	8	5	10	9	16
Dressings ... ..	33	23	30	36	36	68	52	76
Advice ... ..	24	46	27	23	20	42	46	83
TOTAL...	485	645	439	666	777	928	832	1094

F. NEWLAND-PEDLEY, F.R.C.S.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—Mr. T. D. Watt, of Edinburgh, desires us to say that his name was omitted from the list of successful candidates for the dental licence sent us for publication last month.

## CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

**Tenth International Medical Congress.  
Section XIV.—Diseases of the Teeth.**

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The Committee of Organisation at Berlin has nominated Mr. Mummery, of London, Mr. Macleod, of Edinburgh, and Mr. Baker, of Dublin, as Honorary Presidents, and myself as Honorary Secretary for Great Britain and Ireland at the above Congress, and as they earnestly desire that our country should be fitly and honourably represented they appeal to members of the profession to assist them in achieving this object by their attendance, by communications, by demonstrations, and by exhibits. Notification of any intention to contribute in any or all of these ways should be sent to the Honorary Secretary with the least possible delay.

As no doubt many of your readers have been wondering as to what has been done with regard to the Congress, the following information may not be without interest. The work of the Congress will begin on Monday, the 4th, and terminate on Saturday, the 10th August, being conducted as usual in both general and sectional meetings. A considerable part of the sectional work will be conducted in English. A list of the entertainments and social gatherings has not yet been issued, but these, no doubt, will be both numerous and attractive. Previous experience of Berlin hospitality on a similar occasion warrants me in recommending this as an especially favourable opportunity for a visit to this fine city and its environs, as not only will places and objects of interest usually inaccessible to the ordinary visitors be open freely to members of the Congress, but many of them will be seen under particularly attractive if not unique conditions.

The demonstrations at the Dental Institute, besides being interesting in themselves, will afford a favourable opportunity for examining a well-equipped school of modern dentistry, whose progress and success partakes even somewhat of the phenomenal.

Some little misunderstanding seems to have arisen from the fact that some members of the profession have received special invitations from Berlin, whilst others have not. Such invitations were sent to all members of the Odontological Society by the Committee of Organisation, but there was not the slightest intention to confine membership of the Congress to those personally invited. Any duly qualified British practitioner is eligible for membership on paying his subscription of £1, which will also entitle him to receive a copy of the whole of the Transactions of the Congress.

In connection with the Congress, will be held an International Medical Scientific Exhibition, in the Landes-Ausstellungs-Parkes. This exhibition is expected to be very large and interesting. Anybody and everybody, scientific or non-scientific, learned or ignorant, are invited to take part in the Exhibition. It may therefore be as well to state that the conditions with regard to rent (on the application forms which have been sent out) are only meant to apply to any firm

or manufacturer who is exposing his wares for the purpose of advertisement. Space will not be charged for, where the exhibits of purely a scientific nature are made by members of the profession. The unpacking and packing of the exhibits from abroad will be undertaken by an experienced firm of expedition agents specially engaged for the purpose.

The Department of Odontology will be under the control of Professors Busch, Miller and Sauer. The date for closing the application list is fixed for June 15th, but I am informed that any exhibit announced by any member of the profession in this country a few days after the specified date will be gladly received. Application forms may be had on application to the Honorary Secretary for this country.

The following practical tips may prove useful to intending visitors. You will avoid a good deal of trouble and worry by securing your card of membership before leaving, by remitting direct to the General Treasurer, and enclosing your visiting card with your qualifications. Ladies can also obtain cards of membership, which will entitle them to assist at the meetings, to visit the exhibition, and, what is most important, to procure cards for the various social functions. With regard to travelling it will be well to remember that Monday 4th August, is Bank Holiday, and that consequently on the Friday and Saturday previous, the travelling accommodation will be more than usually taxed. The best route from London is by Flushing (twenty-four hours); for those who prefer a longer sea voyage the journey by rail from Hamburg or Bremen is relatively short. The Great Eastern Railway Company have offered special facilities, if a sufficient number apply, by way of Rotterdam, with a facultative return, *via* Antwerp. This route would enable members to spend a pleasant holiday in Holland or Belgium as they return.

Any further information received will be duly communicated, with your kind permission, in the next number of your journal.

Yours very faithfully,

2, King's Parade, Cambridge.

GEO. CUNNINGHAM.

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### Semper Fidelis.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Although resident in Brighton for many years, still as an Exonian I continue to take a lively interest in anything connected with the old city Exeter. Now the one great event of interest to the dental profession I consider is this proposed visit of the British Dental Association to the ever faithful city in August.

I have thought the enclosed newspaper cutting might be helpful to any who have already determined on attendance at the meetings, &c., of the Association, and it might serve to induce some hesitators who have as yet not quite decided as to where to take the usual annual holiday, seeing the warm reception the city is prepared to give them, to put in an appearance and add to the interest of the visit. And I will only further add, that the antiquarian will find much to interest in Exeter and its neighbourhood, and the lover of the picturesque, can he only find the time to travel a little beyond the city and contrast the variety of scenery which the North of Devon presents to the South.

With such a genial President as my friend, Mr. Browne-Mason, the success of the proposed visit is ensured.

Faithfully and hopefully,

14, *Pavilion Parade, Brighton.*

OCTAVIUS A. FOX.

The Annual Meeting of the British Dental Association, which will be held at Exeter this year, and of which Mr. Browne-Mason is the President-Elect, augurs to be one of the most successful gatherings it has ever held. The programme has evidently been arranged so as to combine business with pleasure. The head-quarters of the Association, I see, will be at the Rougemont Hotel, but the business meetings will take place in the Art Gallery of the Albert Memorial Museum. The members will be welcomed by the Right Worshipful the Mayor on the 20th of August, at a reception which is to be given in their honour. The next day will be devoted to the reading of papers and discussion, and in the evening the Reception Committee propose holding a reception at the Museum, to which the members and their friends have been invited. The whole of the rooms in the Museum on this occasion have been placed at the disposal of the Committee; in one room there will be a vocal and instrumental concert, in another the Royal Marine Band from Plymouth will discourse a choice selection of music, and will subsequently perform in the Art Gallery, which is to be made available for dancing. Friday, the 22nd, is fixed for the meeting of the Benevolent Fund, and the members and their guests will dine together at the Rougemont Hotel in the evening. The next day will be partially occupied with demonstrations and clinics, to be given in a ward of the Devon and Exeter Hospital. So much for the prosaic side of the visit. Turning to the lighter or recreation portion of the programme, I notice that ample arrangements have been made for showing our dental visitors the many objects of interest in historic old *Semper Fidelis*. Few cities can boast of a grander past than Exeter, and I am glad to find that its "lions" will not be allowed to sleep the sleep of the forgotten.

By a singularly fortunate coincidence the summer floral fête of the Devon and Exeter Horticultural Society will be held in the grounds of Northernhay during the week, and with that considerate courtesy which is ever a leading characteristic of Devonshire hospitality the Committee of the Society have issued tickets of invitation to members of the Dental Association coming from a distance to visit the exhibition. Devon is noted for its wealth of beautiful flowers, and at these shows there is always a brilliant gathering of Flora's devoted worshippers. The thousand and one lovely and delicate tints of the flowers radiant in all their summer glory, mingling with the galaxy of summer costumes never fails to create a picture which requires the artist's magic skill rather than the efforts of the word-painter to describe. All I will attempt to say is that the scene is as pleasing to the eye as it fills the senses with an admiration for the beautiful. The Northernhay Show, will, indeed, be one of the greatest sources of attraction for the visitors, and the thoughtfulness of the Horticultural Society will, I am sure, be much appreciated. Exeter, too, is a magnificent starting point for excursions. By road and rail the city is in good communication with some of the grandest, the most fascinating, and most picturesque spots in the county. The Devonian Alps are close by; wild Exmoor, romantic Fingle Bridge, Lustleigh Cleave, Chudleigh Rocks, Becky Falls, and the English Rhine are all within an easy day's outing; while Devon's charming marine resorts and their pretty surroundings are equally accessible. No city possesses greater facilities for entertaining a large number of visitors than Exeter. I am certain, therefore, that the members of the British Dental Association will be highly gratified with the result of their stay. The proceedings will be wound up by an "At Home" at the Victoria Hall, given by Mr. and Mrs. Browne-Mason.

**Microscopical Section for the Annual Meeting,  
Exeter, August, 1890.**

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Allow me to draw attention to my letter, page 319, in the May Journal. I have had many kind responses to private appeals by me, but I again wish in this public manner to draw the attention of the members to what is being done. One room in the Museum will be entirely devoted to microscopes, of which there will be twenty-five with lamps, &c., and some  $\frac{1}{4}$  immersion objectives, &c., under the charge of Mr. Curties, junior, from Baker's, High Holborn. Many members will bring specimens of great interest, and some will themselves exhibit and explain specimens; but every specimen intended for exhibition must bear upon it the name and address of the lender. The Committee make this a necessity.

It is also contemplated, if it be possible, to get a suitable dark room in addition to the room devoted to microscopes, to exhibit by means of the oxyhydrogen lantern, some very interesting micro-photographs of dental tissues, a somewhat new and most excellent method of exhibiting the structure of minute tissues to a number of persons at one time. Altogether, the microscopic section promises to be very interesting and instructive to those who wish to learn.

On Thursday evening, August 21st, as the Reception will consist of members and their friends, it is proposed that the microscopical exhibition should be of a more popular kind, and consist of specimens of beauty and interest rather than of mere scientific value.

The Committee will be grateful for advice or help, and begs that members will communicate any such to

Very faithfully yours,  
W. A. HUNT.

*Pen Villa, Yeovil.*

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**APPOINTMENTS.**

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JOHN MORRIS, L.D.S.Eng., has been appointed House Surgeon to the Liverpool Dental Hospital.

WILLIAM PENFOLD, L.D.S.I., has been appointed Honorary Dentist to the London Homœopathic Hospital, Great Ormond Street, Bloomsbury.

FRANCIS HENRY ELLWOOD, L.D.S.I., has been appointed Dentist to S. Joseph's Convent, Redhill, and Hon. Dentist to Hope Lodge Training Home, Redhill.

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NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.



Members are reminded that their Subscriptions to the British Dental Association became due on January 1st and are requested to forward the same to F. CANTON, Hon. Treasurer, 40, Leicester Square, London, W.C.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 7.

JULY 15, 1890.

VOL. XI.

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**The Annual Meeting, 1890.**

THE pleasant months of holiday-making are rapidly drawing nearer, and in the anticipation of these the thoughts of members of the Association will naturally be turning also in the direction of the Annual Meeting. Many may be asking what the special features of the Exeter gathering are likely to be, and as far as we are able at this early day, we propose to answer these enquirers, and to heighten the pleasures of anticipation by a little foreshadowing of the means by which the executive are hoping to secure for this year's meeting a success equal to that of any of its predecessors.

In the first place, the social success and individual enjoyment of a meeting of this kind are undoubtedly largely dependent upon the attractions and capabilities of the locality in which it takes place, and intending visitors'

may rest assured that in the beautiful and interesting city of Exeter, the Western Counties' men have as delightful a centre in which to welcome the rest of the Association as could possibly be conceived. Indeed those who can feel disappointed with Devonshire must truly be impossible to satisfy. And whilst the traditions of the chair are in the safe hands of Mr. Browne-Mason, no anxiety can possibly be felt as to the manner in which they will be maintained, both socially and professionally.

The rooms in which the meeting, as also the reception by the Western Branch, will take place, will be those of the Albert Memorial Museum, where ample accommodation will be at our service. Apart from the special matters of interest to be imported, the Museum is already a very interesting place to any intelligent person. The collection of lace (especially West of England lace) is very complete, and so are the fossils. The country around has always been noted as a favourite hunting-ground of geologists and palæontologists, and of course a good typical collection of fossils, many of which have been unearthed in the neighbourhood, has grown up within the Museum walls; and the collection of birds, the bequest of the late well-known Mr. Ross, of Topsham, is well worth a study.

In the Free Library it is in contemplation, at the soirée on Thursday night, to give a practical display or demonstration of the marvels of modern electricity, and we can hardly imagine any subject at once so engrossing and so full of interest for our special profession; so that this feature in the programme will, we are sure, be cordially appreciated.

During our stay opportunities will be afforded to members of visiting the Cathedral, the Guildhall (a fine old fourteenth century building) Rougemont and the old citadel; and the Botanical and Horticultural Society, who

happen to be holding an exhibition during the Friday, have very courteously invited any members who have come from a distance, *i.e.*, who are not residents, to visit the show with their lady-folk.

Last year the Meeting was mainly memorable on account of the splendid discussion on the subject of anæsthetics; this year will, we hope, also find some other vital subject carefully and thoroughly debated. The world is very much divided as to the merits of what is called "bridge work." Why should not this subject form a good nucleus for exhaustive discussion? A large number of dental surgeons of repute disapprove entirely of fixing teeth immovably in the mouth, while another large contingent uphold the practice; and a fair and open fight between the two theories, with a just balancing of their respective pros and cons, would undoubtedly be of great advantage to the profession generally. Meanwhile there is likely to be no lack of other topics of interest. Dental education is very much on the carpet nowadays, and it, together with the many side issues that seem inseparably connected with it, are likely to engross a good deal of the attention of the meeting. Mr. Harrison's able paper read before the Southern Counties Branch, and the very instructive discussion that followed thereon, sufficiently show that this must be regarded as a "burning" question by the dental world.

The microscopical show, which has become quite a regular feature of the Meetings, is under the care of Mr. Hunt, of Yeovil, and considering the very rapid progress of practical microscopy, will be sure to be interesting. No doubt micro-photography will be well represented.

Altogether we anticipate a good gathering in every respect; the one only cause for anxiety which existed is being speedily removed—we allude to the absence, up to a late date, of any promises of papers. The Hon. Sec-

retary is very glad to announce in the programme (see below) that in this respect, as in the matter of demonstrations, there will be no deficiency.

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## ASSOCIATION INTELLIGENCE.

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### NOTICE.

A MEETING of the Business Committee will be held on Saturday, July the 26th, at two o'clock, and a meeting of the Representative Board will be held at three o'clock on the same day at 40, Leicester Square, W.C.

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### The Annual General Meeting.

THE Annual General Meeting of the Association will be held in the Art Gallery of the Albert Memorial Museum, Exeter, on Thursday, Friday and Saturday, August 21st, 22nd and 23rd, 1890.

The following will be the order of the proceedings :—

#### *Wednesday, August 20th.*

The Right Worshipful the Mayor of Exeter will hold an Evening Reception as a welcome to the Members of the British Dental Association to the City.

#### *Thursday, August 21st.*

9 a.m.—Meeting of the Representative Board in the Committee Room of the Albert Memorial Museum.

10.30 a.m.—Annual Meeting of the Association for business (open to Members only) in the Art Gallery of the Museum. *At the termination of the Association business the Meeting will be open to Visitors.* Presentation of portrait of J. SMITH TURNER, Esq., to the Association, and of replica to Mr. TURNER.

Mr. S. LEE RYMER will deliver his valedictory Address.

Mr. BROWNE-MASON will take the chair and deliver an Address.

#### LIST OF PAPERS PROMISED.

“On Conservative Dentistry : its Importance as a National Institution,” by J. C. OLIVER, L.D.S.Eng.

“On the Need of a Higher Qualification in Dental Surgery,” by G. G. CAMPION, L.D.S.Eng.

“On the Teaching of Mechanical Dentistry to the Coming Dental Student,” by S. A. COXON, L.D.S.I.

“On Some Porcelain and Gold Crowns for Bicuspid and Molars,” by T. G. READ, L.D.S.Eng., D.M.D.

"On a Model with Draining Tube attached to Antrum," by H. W. MAYNE, L.D.S.I.

*Discussion.*—Crown, Bar, and Bridge Work.

1 p.m.—Adjournment for Luncheon at Rougemont Hotel. Tickets 3s. inclusive.

2.30 p.m.—Meeting resumed for reading and discussion of papers.

5 p.m.—Meeting adjourned till 10.30 a.m. August 22nd.

8.30 p.m.—Soirée at the Museum by the Reception Committee.

Concert, Vocal and Instrumental, in the Art Gallery. Selection by String Band of the Royal Marines, in East Room. Exhibition of Microscopes, Electric Apparatus, &c., to be followed by Dancing in the Art Gallery.

*Friday, August 22nd.*

9 a.m.—Annual Meeting of the Benevolent Fund Subscribers at the Museum.

10.30 a.m.—Meeting of Association resumed for reading and discussion of papers.

1 p.m.—Adjournment for Luncheon at Rougemont Hotel.

Horticultural Exhibition on Northernhay; tickets for each member and a lady will be sent to all members from a distance who notify their intention of attending the meeting.

2.30 p.m.—Meeting resumed for reading and discussion of papers.

7.30 p.m.—Annual Dinner of the Association at the Rougemont Hotel. Tickets £1 1s.

*Saturday, August 23rd.*

10 a.m.—The meeting will be resumed at the Devon and Exeter Hospital, Southernhay, for demonstrations, for list of which see below.

1 p.m.—Luncheon at Rougemont Hotel, after which parties of members and friends will be taken over the Cathedral, Guildhall, Ruins of Rougemont Castle and places of interest in the City.

4 p.m.—The President and Mrs. Browne-Mason will give an "At Home" with organ recital and vocal music at the Victoria Hall.

LIST OF DEMONSTRATIONS PROMISED.

"Pivoting," by F. H. BALKWILL, L.D.S.Eng.

"Tooth Crowning," by F. H. BRIGGS, L.D.S.Edin.

"Mr. William Broughton's Electric Lamp for Operating in the Mouth," by S. G. CAMPION, L.D.S.Eng.

"Continuous Gum Work, applicable to any Teeth," by G. CUNNINGHAM, M.A.Cantab., L.D.S.Eng., D.M.D.Harvard.

"Removable Bridge Work"; "New Vulcanizer and Gas Regulator"; "New Cord Dental Engine," by J. H. GARTRELL.

"The Fitting of Seamless Collars by the Mandril System, in connection with Gold Crowns and Bridge Work," by T. COOKE PARSON, M.R.C.S.Eng., L.D.S.I.

"Gold Fillings by the Herbst Rotary Method ; also a quick process for making Crowns, of common Plate Teeth, with Contour Tin Back for Front Teeth, by means of a soldering iron and hand-pressure, and other Inventions of Dr. Herbst," by CHARLES P. SCHULTZ, M.D.

"Preparing Interstitial Cavities in Teeth for Gold Filling, with Hallam's Separators," by J. WALKER, M.D., M.R.C.S., L.D.S.Eng.

"Immediate Treatment of Suppurating Tooth and Root Filling," by W. H. WOODRUFF, L.D.S.Eng.

#### ANÆSTHETICS.

Points in Anæsthetics for Consideration, by TOM BIRD, M.A.Oxon., M.R.C.S.Eng.

Nitrous Oxide, with special arrangements to avoid noise, &c., adapted for nervous persons and children ; Nitrous Oxide and Ether ; Ether ; Chloroform for prolonged Operations about the Mouth, by DUDLEY BUXTON, M.D., B.S.Lond., &c., &c.

It is proposed to explain Apparatus, and indicate in what cases special methods are advisable, with a view to assist in arriving at a choice of Anæsthetics in any given case.

Oxygen and Nitrous Oxide, with his special apparatus for administering this Mixture, by F. H. HEWIT, M.A., M.D.Cantab., &c.

Any Communications or questions relating to the Demonstrations to be addressed to J. M. ACKLAND, 24, Southernhay, Exeter.

#### SPECIAL NOTICES.

No reduction can be made in railway fares.

All Members attending the Meeting are requested to sign their names in the book provided for that purpose, at the entrance to the Museum. Subscribers to the Benevolent Fund and others are requested to attend the Annual Meeting of the Benevolent Fund.

The Devon and Exeter Institution, the Northernhay Club, the Exeter and County Club, Musgrave House, will grant Members of the Association during the Meeting the privilege of Membership on production of their Cards of Membership.

Gentlemen wishing to read papers should send in their names with title of subject at once to the hon. secretary of Association.

Gentlemen willing to demonstrate should communicate with J. McKNO Ackland, Southernhay, Exeter.

Gentlemen willing to assist at the Microscopic Section should communicate with W. A. HUNT, Yeovil.

Members will find at the Albert Memorial Museum adjoining the Art Gallery a reading and writing room, with facilities for posting letters and sending telegrams. The room will be supplied with writing materials and daily

papers. The room for the Representative Board, general enquiry and Secretary's office, will be on the ground floor of the Museum.

MORTON SMALE, *Hon. Sec.*

The chief hotels in Exeter are the "Rougemont Hotel," which will be the headquarters of the Association, and which will provide a smoking-room reserved for Members of the British Dental Association only—charge for bed, breakfast and attendance 7s. 6d. per diem; the "Royal Clarence Hotel," Cathedral Yard, bed, breakfast, and attendance, 7s. 6d. per diem—this house is situated opposite the Cathedral, in the Close, and in immediate proximity to the Albert Memorial Museum; the "The London Inn," the old coaching house of the City, at the top of the High Street—charge for bed, breakfast, and attendance, 7s. 6d. per diem. The tariff of the above houses will be sent on application to the proprietors. Other hotels are the "Half Moon," in the High Street—charge, bed, breakfast and attendance, 6s. 6d. a day; the "Globe," in the Cathedral Yard, and the "Queen's Hotel"—bed, breakfast, and attendance, 5s. 6d. per diem. As August is a busy period on account of its being the height of the touring season, early application for accommodation is desirable. Visitors to the City will find many delightful excursions for the day to the sea-side at Exmouth, Dawlish and Teignmouth; to each of these places daily excursion tickets are issued by the Great Western Railway and London and South Western Railway. Also by the London and South Western Railway to Dartmoor, from the Okehampton, Bridestowe and Lidford Railway, and at the latter station by an easy walk Lidford Gorge and Waterfall are to be reached and Exeter regained the same day. Amongst the day excursions too are circular tickets by rail and steamboat to Totnes, down the River Dart to Dartmouth, and train to Torquay, returning the same day to Exeter.

Longer trips can be made by rail and coach to Dulverton, over Exmoor to Dunster and Porlock, thence to Lynton and Lynmouth and on to Ilfracombe or Barnstaple, returning to Exeter by train; this would require two days.

The scenery on the borders of Dartmoor is remarkably fine, and can be reached, the visitor will find, by train at other points besides those above mentioned; whilst all round the coasts of Devon and Cornwall are numbers of towns and watering places that would be found attractive places for any Members who would like to extend their holidays.

### The Scottish and West of Scotland Branches.

THE Annual Meetings of these Branches took place at Kilmarnock on Friday, June 6th. The meetings were held in the Art Galleries at 4 p.m. Among those present were Messrs. Walter Campbell, Dundee; James Cumming, Glasgow; Andrew Wilson, Edinburgh; Dr. Reid, Edinburgh; Rees Price, Glasgow; John S. Amoores, Edinburgh; W. S. Woodburn, Glasgow; Charles Matthew, Edinburgh; James Cameron, Glasgow; W. Howard Gray, Glasgow; J. Moore Lipscomb, Kilmarnock; Thomas Wilson, Glasgow; W. Bowman Macleod, Edinburgh; John Stirling, Ayr; D. R. Cameron, Glasgow;

James M. McCash, Glasgow; John Dunlop, Kilmarnock; P. P. Walker, Dundee; David Dunlop, Kilmarnock; H. E. O'Duffy, Dumfries; Dr. Rankin, Kilmarnock, &c., &c.

Mr. LIPSCOMB, as resident in the locality, took occasion to express a hearty welcome to the branches now assembled. He hoped that this their first visit to the west would be satisfactory and enjoyable.

#### THE SCOTTISH BRANCH.

ROBERT REID, L.D.S., President, in the Chair.

The TREASURER (Mr. Wilson, Edinburgh) reported that the funds now amounted to £25, and as the expenditure was small, he suggested that members be not asked for a subscription for a year or two. After some discussion, in which it was pointed out that it was very desirable to have funds to fall back upon in the event of any emergency, it was agreed to continue the annual subscription at 5s.

On the motion of Mr. BIGGS, the Treasurer's Report was unanimously adopted.

The SECRETARY (Mr. W. Bowman Macleod, Edinburgh) read the following report :—

The past year has been a very quiet one so far as the Scottish Branch has been concerned. The Council have had their usual statutory meeting, but had no business of sufficient importance before them to render a special meeting of the Branch necessary. Two complaints of L.D.S.'s advertising were brought under the notice of the Secretary; but a letter from that official, calling attention to this being an infringement of the obligation undertaken when receiving the diploma, was in each case sufficient to cause withdrawal of the advertisements.

Your Council early directed their attention to the present International, Electric and Engineering Exhibition at Edinburgh, and their representations were successful in inducing the Space Committee of that Exhibition to refuse all applications from dental exhibitors.

The Secretary, by the courtesy of the editor of the Edinburgh Post Office Directory, revised the proof of the Professional Directory under the heading "Dentists," and in all but one instance his corrections were attended to.

The one referred to, that of Squire W. Allen, instead of being deleted, as requested, has been removed from the special heading under which it appeared in last year's issue and placed in the ordinary professional list. Your Council are of opinion that this matter should receive your attention, and your legal adviser be instructed to call the attention of the editor to the illegal entry, or (with consent of your Council) take such other course as he may deem expedient.

Professor Sir W. Turner, Dr. Patrick Heron Watson, and Dr. J. Batty Tuke were written to by the Secretary, requesting their support



to Professor Banks' motion in the General Medical Council regarding the apparently loose way in which Clause 37 of the Dentists Act was administered.

The negotiations, which under your instructions were opened for the annual reunion of the Western and Scottish Branches have, as evidenced by this meeting, been successful, and your Council trust that this joint meeting will continue and secure unity of action in all movements having for their object the thorough education, consolidation, and prosperity of the profession.

Two new members have been admitted during the year.

The CHAIRMAN moved the adoption of the report, which was agreed to.

Mr. J. S. AMOORE moved the re-election of the following office-bearers, which was also agreed to *nem. con.* :—

President, Mr. R. Reid ; Vice-President, Dr. Williamson ; Treasurer, Mr. Andrew Wilson ; Secretary, Mr. W. Bowman Macleod ; Members of Representative Board : Messrs. W. Campbell, Robert Reid and W. Bowman Macleod.

Council : Messrs. Biggs, Campbell, Crombie, McGregor, Matthew, Rees Price, Walker, and Watson.

After some discussion it was moved by Mr. CAMPBELL, and seconded by Mr. BIGGS, that the Hon. Secretary of the Scottish Branch be requested to write to Mr. Watson and ask him to collect evidence in a case of infringement of the Dentists Act, in which he had had some correspondence, and to forward this evidence to the Hon. Secretary, who would then forward it to the Hon. Secretary of the Association in London to be adjudicated upon.

Several members expressed themselves strongly upon the question, but it was considered that this would be the most effectual way of dealing with the matter.

Mr. CAMPBELL brought forward a case of infringement of the Dentists Act in Dundee. Mr. Campbell undertook to get the necessary legal evidence and forward it to the Hon. Secretary so that immediate action might be taken. This concluded the formal business.

#### WEST OF SCOTLAND BRANCH.

The Annual Meeting of this Branch was then held, Mr. J. Moore Lipscomb, L.D.S.Eng., President, in the chair.

The HON. SECRETARY (Mr. Rees Price) submitted the following report :—

The Branch has at present a membership of forty-three. One member of the Association has resigned during the past year. Though still a member of the Association and an L.D.S. of the Glasgow Faculty, a gross form of advertisement issued by this individual was brought to the notice of the Council lately. The attention of the Business Committee of the Association was drawn to the matter.

The Secretary of the Glasgow Faculty was also communicated with, and a warning notice has been sent.

The Midland Branch intimated that Dr. Mitchell Banks, of Liverpool, had consented to bring before the General Medical Council the continued large number of registrations under Clause 37 of the Dentists Act. The Council appointed a Committee to deal with the matter, and the three representatives of the General Medical Council resident in Glasgow were seen and the facts fully placed before them. Dr. Williamson, of Aberdeen, saw Professor Struthers, of Aberdeen University, on the same matter, and the Hon. Secretary of the Scottish Branch was asked to see the representatives resident in Edinburgh. It is hoped that some satisfactory result may accrue.

In November last, on a nomination paper properly signed, the Council, under powers given them in Bye-law 1, elected a dental surgeon as a member of the Association, with a view to his joining the Branch. The election was duly notified to him, and the paper sent to the Hon. Secretary of the Association. It then appeared that a nomination paper had been signed by the candidate some six years ago, when the L.D.S. Society was converted into the West of Scotland Branch of the British Dental Association. There seems some doubt whether intimation of election on this nomination paper was ever sent to the candidate, but the Business Committee refused to accept the new election, unless arrears of subscription were paid up.

The Hon. Secretary of the Association has not communicated with the dental surgeon, and on February 23rd the Business Committee passed a resolution declining to have "further action in the matter without the case being laid before the Representative Board," and the Business Committee left the Branch Representatives to bring the matter before the Board.

As the power of the Branches of the Association to elect candidates as members of the Association appears to be called in question, the Annual Meeting is asked to approve the position which the Council has taken up.

Mr. REES PRICE said that there had been a good deal of correspondence between the Council and members of the Business Committee upon the matter contained in the last three paragraphs of the Council's Report. Two issues arose out of the question. The one dealt with the particular election and re-election last November. There could be no doubt that the first nomination paper had been properly filled up. But on the other hand it was exceedingly doubtful if intimation of election had been sent to the candidate, and certainly payment of subscription had never been tendered or enforced. Finally the dental surgeon had been asked to pay up his two years of arrears, and had declined, since, in the absence of notice of election, he had never considered himself a member of the Association. The second issue is of greater importance, and affects the power of the Branch

Councils to elect individuals into the Association. Had the Council possessed the information which was known to the Treasurer of the Association in London in this particular case, it would not, of course, have proceeded with the election last November. This election was perfectly regular and in order on the information in possession of the Council. To prevent future friction consequent upon similar circumstances arising, the Council unanimously suggested that a list of men ineligible for election to the Association should be sent to the hon. secretaries of the Branches every year. Some of the members of the Business Committee have not received this favourably. And with a view to possible future action, Mr. Brownlie (who is not able to be here to-day) has asked me to submit a resolution to you. The Branch Councils have a valuable privilege in the election of members under Bye-law 1. Is not this privilege seriously curtailed when an election by a Branch, duly carried out and intimated, is invalidated on information pigeon-holed in London? *All* the facts are within the knowledge of the Executive of the Association, but are not available at the proper time to parties most interested.

Mr. WILSON: The question turns upon the point whether a man is really a member of the Association until he has paid his entry money and subscription? I do not think the mere election really makes him a member. I think payment is really required.

The CHAIRMAN: The turning point is whether a gentleman is a member until he has paid a subscription? Now, this gentleman never paid his subscription, although proposed, seconded, and elected by the Council.

Mr. CUMMING: I saw the gentleman on the subject, and he informs me that he never knew he was elected.

On behalf of Mr. Brownlie the HON. SECRETARY made the following motion on the matter:

"That the Meeting approves the action taken by the Council in the matter of the election of members, and requests them to take such further steps as they think fit."

This was seconded by Mr. CAMPBELL, and after some conversation unanimously agreed to.

The Treasurer's Report, which had been duly audited, showed the total receipts to be £24 11s. 8d., and after deducting expenditure the balance amounted to £21 5s. 7d.

The CHAIRMAN proposed the adoption of the report, which was cordially sustained.

On the motion of Mr. AMOORE, seconded by Mr. GRAY, the following office-bearers were elected for the ensuing year: J. Moore Lipscomb, L.D.S.Eng., Kilmarnock (President); W. F. Martin, L.D.S.Glas. (Vice-President); D. R. Cameron, L.D.S.Glas. (Treasurer); W. S. Woodburn, L.D.S.Glas.; J. A. Biggs, L.D.S.Glas., J. R. Brownlie, L.D.S.Eng. (Members of the Representative Board);

Oswald Fergus, L.D.S.Glas. (Editor); Alex. White, L.D.S.Glas., Norman Macqueen (Hamilton), Alex. Fraser, L.D.S.I. (Largs), James Cameron, L.D.S.Glas. (Curator), Andrew Wilson, L.D.S.Edin. (Council); Rees Price, L.D.S.Eng. (Honorary Secretary).

Mr. P. S. WALKER, of Dundee, shewed his valve cylinders for protecting the nozzles of nitrous oxide gas cylinders in transit. He also shewed a beautifully finished mouth gag for adults and children.

Mr. THOS. WILSON, L.D.S.Glas., Glasgow, also shewed in working order a water motor for driving the dental engine, as described in the last number of the Journal.

Mr. REES PRICE, L.D.S.Eng., shewed the improved Cuttriss electric dental motor worked with a storage battery.

Mr. J. A. BIGGS, L.D.S.Glas., demonstrated the administration of nitrous oxide and chloroform combined. A few drops of the latter are placed upon a piece of cotton wool and inserted in the facepiece. By this method Mr. Biggs claimed that anæsthesia was considerably prolonged. Two patients were operated upon.

The Scotch and Irish Oxygen Co., of Glasgow, who are makers of nitrous oxide, had an exhibit of 250, 400, and 800 weldless steel cylinders tested to a pressure of 4,000 lbs. Also tripod stands, cylinder keys and fittings. An interesting exhibit was a finely made enlarged copy, in section, of Brier's patent gland valve for high-pressure gas cylinders. An ingenious automatic regulator for reducing the pressure of the issuing gas, to any desired rate, was also shewn.

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The Members afterwards dined together in the evening at the George Hotel, Mr. J. MOORE LIPSCOMB occupying the Chair, and Mr. WILSON discharging the duties of croupier. Amongst the guests were the Rev. J. W. Armstrong, Dr. Jas. M'Alister, Dr. Rankin, &c.

The toast of "The Queen" having been proposed and loyally responded to, the CHAIRMAN rose to give the toast of the evening "The British Dental Association," and was received with great applause. Those present, he said, were quite aware that this Association had been formed some ten or twelve years ago, and that since then it had been looking after their interests as dentists, and looking after the general public, inasmuch as it prevented, as far as possible, any illegal practices going on, and therefore the public were saved from a great deal of bad workmanship. The Association numbered some 800 members, and was without doubt becoming a great power in the profession. The Branches of the Association might be looked upon as the Members of one organism, and he welcomed any signs of activity as indicating the healthy life of the whole organism. It was the duty of the Branches to take a vivid interest in all questions affecting the welfare of the profession, and the management of the Association. And although there were occasionally differences of opinion

he did not think that that was altogether to be regretted. Every one had a right to his own opinion, and those differences of opinion only showed that any question is capable of being looked at from different standpoints. Finally he would urge upon all Members of the Association present to do all in their power to make it a still greater force in the land, by inducing as many as possible to join it. He looked forward to the time when the Association would number 2,000 Members. "Union is strength," and the larger and closer their union, the greater would be their strength. He had much pleasure in proposing the toast of "The British Dental Association," coupled with the name of Mr. W. Bowman Macleod.

Mr. MACLEOD said he was glad to find that they were not altogether ignorant of the good qualities of the British Dental Association, as they had heartily evinced by the cordial manner in which they had received the toast. For the short time the Association had been in existence it had done the profession a very great deal of good. It may not have come up to the anticipations of its founders or to the dreams of its most sanguine supporters; but this he claimed for it, that considering the time it had been in existence and the opportunities it had had it had made the best of them, and brought the profession into a better condition than that in which it found it. Many expected that when the Association was formed it was to sweep away all the errors and abuses which for years, and even for centuries, had hedged the practice and profession of dentistry. To the calm, reasonable thinker this must appear to be an impossibility, more especially when they thought that the Association found them not as a profession at all, but as a lot of disunited units, each following the calling for his individual benefit. To change this had been the particular object of this Association, and he thought it had achieved that to a very great extent, although it had not altogether swept away those excrescences—those quacks who pestered all professions, and who could never be got rid of so long as human nature remained what it is. It might teach an intelligent public to shun them, but there was always a certain portion of the public who believed that which they understood not rather than that which they saw, and so long as they had a public of that description they would have men catering for them. The Association might occasionally be able by legal means to remove obstacles from their path, but at the same time its greatest power for good lay in teaching that it was upon themselves and their own honourable actions they had mainly to depend for their own and the profession's advancement, and not by compelling *others to obey* rules or laws laid down by the Association. He knew that there were a great many men who thought the law could do everything. Now, in a country such as this the law was very restricted in its action; that was to say, in a country where protection was not recognised it left the main things to be done by the individuals them-

selves. He thought that while they looked in certain cases to the law as it precisely stood being attended to by each individual, and bringing up any transgressors against that law, they must be careful in their own individual lives that they did not foster and rear up what they must call professional criminals. He knew that there were those in practice who objected to unqualified men practising on their own account, and yet had no objection to accepting these men's services so long as such were rendered to their advantage; but, on the other hand, whenever these separated themselves from them and sought to practise upon the public, those same professional men started up and denounced them as swindlers and incompetent men. He (the speaker) held that those who were competent to serve as full-blown assistants were also competent to practise on the public, and it ill became those who made use of their assistance to take the first step to call upon the powers that be to crush them. It ought rather to be the endeavour of the practitioner in all assistance which he received to see that that assistance was rendered by individuals who were duly qualified or who were pursuing a legitimate course of study, and who had morally made themselves responsible for the fulfilment of the agreement, as indicated by the General Medical Council. He thought if that were done they would very soon purge the profession to a great extent; yet even in the medical profession, which was hedged round by greater safeguards than others, there were quacks. They had the uneducated quack and the educated quack, and both of those in certain localities succeeded where the properly trained yet withal modest and gentlemanly practitioner failed. They would, no doubt, find this in the dental profession as well, so that they must not blame the British Dental Association for not being altogether able to suppress these quacks, when the medical profession had not been able to do so. Mr. Macleod went on to say that they must not expect too much from the Business Committee, who gratuitously devoted a great deal of time to the business of the Association, and hoped in the future with increasing funds they would be able to secure the services of a salaried gentleman who would devote his whole time to its business. One principal object of the Association—the one in which it acted most freely and most powerfully—was that it brought them together from their isolation, for the interchange of knowledge, and thus they got to know each other better, to appreciate one another, to speak more kindly and in a more brotherly way of their professional brethren. Previous to these meetings they used to dread one another, but now he was happy to say these prejudices were being worn away, and they could now stand face to face with their brother professional and call him—

“A brither man for a' that.”

If the Association had done that, and still continued to do it, it would

have fulfilled the main object of its birth and creation, and nobody could ever regret that it had been called into existence.

Mr. WOODBURN next gave the toast of the "Scottish Branch of the British Dental Association," which was heartily received.

Mr. AMOORE then gave the "West of Scotland Branch."

The CHAIRMAN, in responding, said that in the West they were doing all they could to keep up the important branch of dental surgery with which they were so closely connected. They were not strong numerically, but they were endeavouring to attain the position which they would like to hold. He hoped that the meetings had been satisfactory, and that the present gathering was enjoyable. He hoped they would all come back and help them in the West to keep up the standard of that profession to which they were so closely allied. The meetings had been entirely in the hands of his friend, Mr. Rees Price, who had spared no effort to make them successful.

Mr. BIGGS, in a few words, proposed the toast of "Kindred Societies," coupled with the name of Dr. Rankin, of Kilmarnock, Vice-President of the Ayrshire Medical Union.

Mr. RANKIN, in reply, said that it gave him much pleasure personally to be present at the meeting, and in the name of the medical practitioners of Kilmarnock, and as Vice-President of the Ayrshire Medical Union, and as a member of the British Medical Association, to give them a hearty welcome to Kilmarnock. He had been very much pleased with the demonstrations in the Art Gallery, and to note the rapid progress which the profession of dentistry was making. He was of opinion that it was only in its infancy, and that a bright future was before the profession. He had been present at the demonstrations of administering nitrous-oxide and chloroform to a patient who was having teeth extracted, and the effect was marvellous. He was quite certain that further experiments would elucidate even more perfect results in the alleviation of suffering in so painful an operation as extracting teeth. He was highly pleased with the remarks of the chairman, Mr. Lipscomb, insisting upon every member of the legitimate profession joining the Association in their various districts. Union was strength. Let them be thoroughly united, and they had no foe to fear. One thing which he was very pleased to observe was that the examiners and dental authorities were raising the standard of the profession by extending the curriculum before giving the diploma of surgeon-dentist. This would have the effect of keeping out those who were incompetent, and at the same time make the profession more remunerative to those who were already members of the Corporation. He trusted the day was not far distant when the British Medical Association would take the Dental Association under its fostering care and look upon it as a legitimate offspring, and recognise in it a co-worker in ameliorating the ills which flesh is heir to. He hoped in its annual gatherings they would have a regularly recognised section of dentistry,

when all the latest improvements in the profession would be fully ventilated.

The other toasts were "The Visitors," proposed by Mr. CAMPBELL, and replied to by Dr. JAMES McALISTER, Kilmarnock; "The Chairman," by Mr. AMOORE, and "The Croupier," by Mr. STIRLING.

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A correspondent sends us the following account of the excursion :—

Ah me, for the early faiths and beliefs taught to us in our childhood ! In answer to the query, What do you know of Scotland ? we used to be instructed that—Scotland is a barren tract of country lying to the North of England, famous for the hardness of its rocks and of the heads of its inhabitants. It contains two towns of considerable size : one, Edinburgh, builton a tall rock ; the other Glasgow, situated on the river Clyde. The dwellers in the former city are proud, and characterised as being "East windy and West endy," those of the latter are distinguished by their sturdy and unremitting endeavours to swell the national revenue, in which they are greatly assisted by their wonderful powers of inbibition. But truth and error were ever mixed, and are here. Awhile ago I received an invitation to accompany the Scottish Branches of the British Dental Association on a short outing, the rendezvous being Kilmarnock, ever famous for the manufacture of night-caps (which are now, however, taken internally). On arriving I found an imposing coach and four drawn up in front of the hotel, with crested panels and other emblems of magnificence. The preliminary introductions were soon got over—the President, not a formidable and over-awing individual, but one whose hearty manner, and genial presence set us all at our ease at once, and who himself handled the ribbons with such an air of I'm-used-to-this-sort-of-thing-don't-you-know, that we rattled off down the street with a rising sense of respect at the versatility of his genius, and a settled determination that for our own part we were going to enjoy ourselves. We were soon through the streets of the old town, and out into the open country—and what country ! Never shall I forget that drive. The weather was perfection—a bright sky above, a cool, fresh air blowing in our faces ; the road, every inch of it, clean, hard, and dry, rattled musically to the fall of our horses' hoofs as we bowled along. All around us nature was clothed in its freshest green as yet untarnished with summer dust ; along through shady avenues, out into bright open country, where the wind played rythmically with the tall meadow-grass, hedgerows laden with May blossom, long belts of woodland where the bright fresh tints of the beech and maple stood out in pleasing contrast to the sombre old Scotch firs, which one could almost imagine looking down with patriarchal contempt on their more changing kindred. And then as we neared the coast, the sharply cut crags of Arran rose to view in the distance, the island below bathed in purple haze, and in the nearer foreground the sun glistening on the rippling sea.



After passing through the picturesque village of Dundonald, with its old Castle towering above us, we turned to the right towards Irvine, passing Auchens and the old manor house of Shewalton ; then on through Drybridge and Loans, reaching the Troon golf links which skirt the shore ; we pulled up at the Club-house—somebody said to water the horses, but as we all went inside I cannot say if the purpose was fulfilled. *We* had something, however—I forget what they called it—the name began with a “w,” and it wasn’t water, and it wasn’t bad. After some more driving we reached the furthest point of our travels, Burns’ Monument, some three miles beyond Ayr, and made ourselves personally acquainted with some of the early scenes of Burns’ pilgrimage here on earth. We visited Alloway Kirk, immortalised by that bard in “Tam O’Shanter.” A weird figure representing an old man was placed there, who might have been the father of the witches as far as appearances went. To him one of our boldest spirits thus addressed himself in these cabalistic words, “Fire away, old man !” The effect I shall never forget. There was a preliminary gurgle, and then followed an apparently interminable succession of sounds more or less articulate. On, and on, and still on, they went, and I sighed as I thought of the joys of lunch which were awaiting us at Ayr, and wondered whether we should ever realise them. When lo ! just as I was relinquishing all hope, the same valiant spirit came to the rescue, and dropped a coin into the figure’s hand. The effect was instantaneous, the jaws snapped, the noise ceased, and all was still. As we were coming away he (the bold member) said to me, “What do you think of that ?” “Wonderful,” said I ; “Chinese ?” “No, Scotch. He was reciting from ‘Tam O’Shanter.’ Grand poem that !”

Only one incident occurred to mar the day’s pleasure. Driving into Ayr, an audacious youth, struck with the grandeur of our equipage shouted out that one word “Sequah.” In an instant the light of twenty-eight eyes (fourteen pairs, that is) blazed wrathfully upon him, and he shrivelled up and disappeared in an instant, and we passed on not without a sigh of regret, as we thought of his bereaved mother.

Arriving at Ayr we found ourselves in time, after all, for a most acceptable lunch which our Ayrshire hosts had provided for us, and we ate, drank, and were thankful. After a short interval we dispersed, some returning to their respective homes by train, others returning to Kilmarnock in the same magnificent style as that by which we came ; and if anyone in my presence ever again casts an aspersions on the beauty of Scotch scenery or the kindly good-nature of Scotchmen, why, I shall be very pleased to call him out.

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### The Irish Branch.

THE Ninth Meeting of the Irish Branch of the British Dental Association was held in the Board Room of the Royal College of Surgeons in Ireland, on Tuesday evening, June 10th, at eight o'clock. The PRESIDENT, J. C. Clarke, L.D.S.Eng. (Belfast), in the chair.

R. THEODORE STACK, L.D.S.Eng., moved amendments to the rules 5 and 16, which were seconded by DANIEL CORBETT, Jun., and G. M. P. MURRAY. The amendments having been put to the meeting were passed unanimously.

The HON. TREASURER (A. F. Thomson), read his statements of accounts duly audited, shewing a balance in hand of £18 15s. 10d.

DANIEL CORBETT, Jun., and J. O'DUFFY proposed and seconded the adoption of the treasurer's report, which motion having been put by the chairman was carried unanimously.

The PRESIDENT then proceeded to read his address to the members as follows :—

GENTLEMEN,—When you did me the honour of electing me as your President, I was deeply sensible of the compliment paid, not only to myself, but to my brethren in the North. I cannot hope to fill this chair with the same acceptance as our late worthy friend, Dr. Moore ; at the same time, it will be my earnest endeavour to do everything in my power to help along the good cause. As I look back in the past, I am reminded that it is upwards of thirty years since I commenced my professional education—a youth of seventeen, full of hopes and fears, trusting to my father for guidance and instruction.

We had no Dental Hospitals, no splendid schools, such as we now possess. The movement for getting a legal qualification for ourselves, providing proper means of professional education, and raising the status of our profession, had just commenced, and at one time bid fair to fall to the ground owing to dissensions. The good men and true, whose names will ever be remembered with grateful affection, worked with a will, and while many have lived to see the desired end attained, others have passed to their rest, knowing the cause was in good hands, and would be prosecuted to a successful issue.

What changes have taken place since then : new systems and new forms of treatment have appeared ; the days of bone work and natural teeth, which were then in the decline, have now become a thing of the past, to be replaced by systems more lasting, beautiful, and truer to nature. Tube teeth and spiral springs are fast giving place to flat teeth, vulcanite, and suction plates, to be followed by what we cannot say ; for, in this age of progress, our good old profession, like everything else, has made rapid strides, and, verily, there are few of us who do not think that in another thirty years our present ideas will be very old-fashioned.

Of later date, perhaps the most remarkable innovation is the crown

and bridge work. For myself, I cannot speak in terms of too great praise of the former, whether the different forms of porcelain crowns of which perhaps the Logan is the most satisfactory, or the gold cap crowns for the molars. In the hands of careful operators, we have opportunities of doing work not only beautiful in appearance, but of undoubted utility and comfort for mastication, surpassing plates, such work as will, I believe, be seen by our sons and admired.

Of bridge work we cannot say the same. We see little of it and hear less. The difficulty of repairing, the great strain upon anchorage teeth, &c., are defects, we all know, of a very serious character. I do not for one moment pretend to say there are not some, or even many, cases in which the system may be adopted with advantage. There is too much of the mushroom growth about it, and, though beautiful in theory and appearance, lasting qualities are absent, and it will probably follow that beautiful fickle process, celluloid, into obscurity, to be remembered mostly with regret.

On the surgical side of our work progress has been equally marked. Science and research always come to our aid, and at no time more than the present is it more necessary. The teeth we have to deal with of the present day are not the same as thirty years ago, of a much lower type, prone to caries in every form, often disappointing the most painstaking operator. Our methods and appliances are advancing to meet this state of matters, and we are still able to see our efforts in conservative dentistry crowned with success. Perhaps the most notable advances are in nerve treatment and contour fillings, and we are reminded of that invaluable boon, the rubber dam, without which I greatly fear our efforts would often be abortive.

And now, gentlemen, I cannot leave this part of my address without saying a few words in praise of nitrous oxide gas, the anæsthetic *par excellence* for dental operations. Its safety, speediness, and freedom from all after effects in the great majority of cases commend it. It is a source of satisfaction to us that at the late meeting of the British Dental Association, at Brighton, after fully discussing the subject of anæsthetics, and having heard the opinions and experiences of the first scientists of the day, not only in our own, but the kindred profession of medicine and surgery, the consensus of opinion was largely in favour of nitrous oxide.

And now, gentlemen, while great progress has been made in the practical details of our work, the progress in dental education has been equally well marked. Dental hospitals and schools have been founded, not only in London, Edinburgh, Glasgow and Dublin, but in many provincial towns, institutions that are equipped in the best possible manner, presided over by the very cream of our profession, gentlemen who are anxious to give their time in instructing the rising generation of dental surgeons.

Nearly every Charity now boasts of its dental surgeon. We hope

and trust the time is not far distant when the government will also lend a hand to help along the good cause, by recognising the importance of dentistry and appointing dental surgeons to our army, navy, and public schools. Some of our large educational establishments already see the necessity of progress, and are insisting upon every pupil on entrance having a certificate from a properly qualified dentist that the mouth and teeth have been duly examined, and are in a satisfactory state. The importance of such a course is obvious to all.

The examination for the dental diploma is a good one, and, thanks to the wisdom of our examining bodies, is becoming more stringent every year. Would it not be well if we emulated the example of our medical brethren and added another year to the course of study? The advantages would be enormous in comparison to the time expended, and, hereafter, would be looked back upon without a regret.

Many are not satisfied with acquiring the dental diploma, and are seeking to obtain medical and surgical qualifications. All honour to them; such may not be in the power of all. Many there are who, after years of practice, regret they did not go further, and would gladly do so if circumstances permitted; and if the college would allow all gentlemen who have fulfilled the curriculum to count their classes and hospital practice, we should see many dentists striving to complete the whole course and qualifying as members of the medical profession.

I would like to see a higher degree in dental surgery granted by our universities, such as doctor of dental surgery, as in America, involving further study, together with a very searching practical examination; and of the importance of this we cannot say too much. We all know there are many who are well up in theory and lack that manipulative skill so necessary to an intelligent treatment of the various cases met with in practice. I am aware there is an objection to the title of doctor unless associated with medicine pure and simple. Such objection would easily be met by instituting the degrees of Bachelor and Master in Dental Surgery—degrees which, I feel sure, would be largely appreciated and availed of.

The Irish College has shewn itself anxious and willing at all times to assist our profession, as evidenced by the generous way in which the doors were opened to admit members of our profession *sine curriculo*; and, though some few unworthy ones may have obtained entrance, it is nothing to the long roll of honourable men, ornaments of our profession, who are proud to be the possessors of the L.D.S.I. In the President and Council (of which not a few of you are members) you have gentlemen who are thoroughly in accord and sympathy with you, and, to put the matter before them in its proper light, is only to ask and to have.

Willing hands and hearts have always characterised the Irish members of the profession. You have worked with a dauntless

pertinacity, determined to attain the end sought. Take this upon your shoulders in the same way, work for it with the same energy, and you will earn the gratitude of the profession the whole length and breadth of these isles.

And now I have only to thank you for your attention to the few remarks it has been my privilege to address to you, and to express the hope that our meetings will be neither few nor far between.

A vote of thanks on the motion of G. M. P. MURRAY, seconded by HERBERT WILLIAMS, was accorded the President for his interesting address.

R. THEODORE STACK made a communication "On the Title of Dentist," which was followed by a discussion in which some members took part.

G. M. P. MURRAY exhibited casts of an abnormal jaw.

HERBERT WILLIAMS described a case of necrosis with some unusual complications and exhibited models of an unusual type of irregularity.

J. D. CUSCADEN through the Hon. Secretary exhibited an interesting case of attrition in artificial teeth, and also a case of bone dentistry.

The HON. SECRETARY made a communication on "The need for fixed dates for Irish Branch Meetings."

The Dental Manufacturing Company, London, exhibited a fine collection of instruments.

The PRESIDENT, having been accorded a vote of thanks before leaving the chair, the proceedings terminated.

W. BOOTH PEARSALL.

*Hon. Sec. to the Irish Branch.*

*13, Upper Merrion Street, Dublin.*

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### Southern Counties Branch.

At the Annual General Meeting of the above Branch held at Kingston-on-Thames on Saturday, June 21st, the report of which is unavoidably delayed until next month, the following discussion on Mr. Harrison's paper "Dental Education," took place. The paper appears among the Original Communications in the present number.

Mr. STEPHEN HOOLE remarked that men did not give sufficient encouragement to their pupils; and pupils, he was sorry to say, did not give sufficient attention to their studies, and they would not give sufficient time to the mechanical part of the work. They were too

anxious to put a black coat on. They would have to be very severe on pupils to get them to do their duty. Another thing was that too many pupils were taken by one man, which was a great drawback. He could name a man who had three or four pupils. He thought they ought to put a stop to that and not take more than one or two pupils, and then hold themselves responsible to them. The habit of taking as many pupils of all classes as they could get, for the sake of the premiums, was a mistake, and until it was stopped they would certainly not raise the standard of proficiency. He thought they ought to make pupils begin with the very humblest work, just as he began by sweeping out the shop and doing the most menial work ; instead of which they wanted to pull up their sleeves and show plenty of cuff, and do work for which they were not qualified. He held that it was the fault of the masters that there were not better mechanical dentists.

Mr. DENNANT said the moot points in Mr. Harrison's paper of last year had been to a great extent settled by the action taken by the different authorities, which was highly favourable to dental progress. He thought the importance of mechanical training could not be over-rated ; in fact, no man would hold his own if his fingers were not dexterous. The future of dentistry, he was sure, would be more than ever conservative, and unique appliances would have to be used in many cases demanding originality of invention and aptitude of finger. Therefore he was very pleased indeed to know that the hospitals were taking that view. With regard to the wider subject of dental education, he thought the time had now come when they must feel perfectly satisfied as professional men with their dental curriculum. There had been in the past a great deal of what he should call toadyism to the medical degree. No one wished to undervalue that degree ; but even now the members of the Medical Council were talking of raising the status of dentists by suggesting that there should be an accommodation of the M.R.C.S. degree, which might be taken as a "feather in the cap" of the members of the dental profession. They were very much obliged for that suggestion, but they did not want it. He took his stand on the curriculum as it was, and he said boldly, that the man who passed successfully through that curriculum was as well equipped for their profession as any other member of any other profession. Were he beginning life again and wanted a "feather in his cap," he thought he should prefer a university degree to a collateral medical degree. Such a degree as Bachelor of Science of London University *would be* a feather in a dentist's cap, and an exceedingly serviceable course of study. Once for all, he thought they need not be ashamed of their status in the dental profession, and they should put their foot down when talk was made of a higher degree. He said the M.R.C.S. was not a higher degree. It was a good and valuable degree, and for a medical man it was

as good a degree as they had for themselves and no better. He could not have said this a very few years ago, but the curriculum had been so immensely improved that they might thoroughly congratulate themselves upon the standing they now occupied, and thank those men who had been their pioneers in this important matter. He hoped members of the profession would speak out very plainly on this question of an accommodating M.R.C.S. degree. He should be ashamed to take it, and he hoped that would be the general feeling of the profession.

Mr. F. NEWLAND PEDLEY said as regards laboratory teaching, he did not suppose there was any doubt that it had been a great defect in the teaching of the Dental Hospital in London, that no means had hitherto been found to allow the students to fit and adjust artificial teeth on patients. At the same time, he thought they must admit that the interests of dentists in practice should be taken into consideration, when any scheme was proposed to supply artificial teeth to the necessitous poor. They had not gone as far as that in Guy's Hospital, and had no intention of attempting it. They simply selected cases from their wards, or from amongst their nurses—patients whose indigence was unquestionable—and the students did the best they could in fitting them with artificial teeth, and when they had finished they made the patients a present of the teeth. In that way he thought students might attain the practice they desired, without any injustice to anybody. If they were to discuss dental education in all its aspects, it became a very wide subject; but he should like to record his opinion that it was to be hoped that the time would come when all dentists would be members of the medical profession. He regarded dental surgery as an integral part of surgery, and a dentist should be on the medical register as a specialist practising a branch of surgery. The time was not far distant when dentists would be medical men; one could make a good forecast of what was coming from the past. It was not very long ago when the profession comprised entirely unqualified men; then there were progressive examinations; and they might feel perfectly sure that the next steps would be in the direction of perfect medical qualification. Then he thought they would have a pretty good footing and a pretty fair understanding would exist between dentists and the medical profession. Was it desirable that they should have too close a connection with the medical profession? He thought one of the things that had kept them apart more than anything else had been the utter ignorance of their work which had prevailed. He thought the proper sphere of dentistry was in a medical school. How could they hope to be free from the results of quackery, if medical men knew nothing whatever about them, and if all they knew of dentistry was what they had picked up as patients in the chairs of dentists, or in their practice in general hospitals? He trusted that the time was not far distant

when all dentists would take degrees registerable on the Medical Register, although he agreed that it was not at all desirable that they should have these fragmentary degrees. They did not wish to plume themselves with feathers that had been shaken out of the wings of other fowls. He hoped that dentists would take medical degrees in addition to the L.D.S. He trusted, too, that in general hospitals they should find means of teaching men in no way inferior to those in special hospitals. Socially and professionally, he hoped their position might be in no way inferior to that held by medical men.

Mr. J. SMITH TURNER thought it was the general impression that the L.D.S. had within itself the capabilities of expansion in a direction to suit the special requirements of the dentist. As a proof of this he referred gentlemen to the literature of the profession. It seemed to him that was the opinion at the time it was discussed, and it was certainly the opinion he now held. He was strongly of the opinion of Mr. Dennant, that whatever qualification they might take, if they had to earn their living as dentists, they would be esteemed as dentists. If they were to earn their living successfully, and to occupy any social position they aspired to, they would be fit for that position according to the way in which they discharged the duties they professed to discharge. He did not think any number of letters behind their names would do them any good, if they were not the men they pretended to be. With regard to teaching mechanical dentistry, he knew it was a difficult question. When the Dentists Act was passed, he was of opinion that there should be no mention of apprenticeship, which had been tried in the medical profession and had to be given up. They had heard what had been said by previous speakers. They had no control over careless teachers or lazy apprentices. When they got a disagreeable pupil they were only too glad to sign his articles and get rid of him; and when a pupil got an incompetent employer, he was only too glad to get quit of him. Unless they got two men equally conscientious—a competent master and an industrious pupil—their apprenticeship, professionally speaking, was a myth. The object of establishing the hospital teaching, as it was now being established, was as much as possible to put a check upon that unhappy condition of affairs, which gave no control either over apprentice or teacher. All that they could demand was that the time specified was filled in; they had no power to apportion the hours which the master must devote to the pupil, or the time which the pupil should give to particular work. How far the glaring defects of the system could be remedied by teaching in the schools and special hospitals, was perhaps a difficult question to decide; but it seemed to him that with a school such as they had in Leicester Square, or in Great Portland Street, they would require a great many nurses, and a great many requiring artificial teeth, to give the students a fair chance. The thing might do very well in a small school, and he admired it as far as it went; but to think that they had



reached the bottom of the question when they took that step was misleading. He believed the gentlemen who were formulating the scheme for supplying artificial teeth to the necessitous poor were as considerate as any men could be to the young practitioner in dentistry. They could not consider all men who called themselves dentists in the present day. There were men who called themselves dentists, who pretended to do what they had better leave undone. They could not consider such people when they had the question of the dental students before them; but he believed that, so far as human ingenuity could go, it would be the object of the authorities at Leicester Square to protect the hospital from imposition, and to protect the legitimate practitioner from injury. More than that they could not do; more than that they need not be called upon to do. With regard to the teaching of young men pupils, and the remarks that had been made as to the way they ought to be treated, he would call their attention to the fact that, before a youth could register as a dentist, he had to pass a preliminary education, and if they got a youth educated up to the standard they required now, and they asked him to take off his coat and sweep the floor, he said they were committing an indignity upon him and wasting his time. The intelligence that was implied in passing that examination made a dental student a very different atticle to what he was some thirty or even twenty years ago, when they all went into the workroom fresh from school, with the prospect of seven years' apprenticeship before them, but without the prospect of four years at a general hospital or two years at a dental hospital. Then all the knowledge they could get was crammed into their apprenticeship of seven years, and it was thought the right thing to do to teach a boy to sweep the shop. What he (Mr. Smith Turner) learned by sweeping the shop he did not know; he met with a good deal of dirt sometimes, and he missed what would have been of much more benefit to him. He knew there were difficult models sometimes to cast; but it was a very small part of the work of a dentist to cast models; and if he could not teach a pupil in two or three hours how to cast models, he should sav he was of no use as a teacher, and that the youth was no good as a pupil. Their attention must be given to the higher education of the pupil, to the principles involved in constructing artificial dentures. That must be obtained by practice; but the principal teaching must be that of the intellect. They could never expect a youth to grow up an expert workman—if he was to be an expert manipulator and a competent operator—in the operating room. One branch of the work unfitted him for the other. If they tried to combine the two they would fail in the most important one—in the operating room. There was a delicacy of touch and an expertness of manipulation required in the operating room which could not be associated with the workroom. The condition of their hands would be affected. Let those who worked at the bench continually say if it did not destroy their delicacy of touch? They must not try to

make their pupils thorough mechanics, except in principle. They could teach them all the principles of dental mechanics. They could teach them to know when work was done, and how it ought to be done, and they could do all that without being very expert workmen. He was very glad to hear such an expression of opinion with regard to what Mr. Pedley had called a fragmentary degree. He thought, as Mr. Dennant had said, it was almost an insult to the profession. It was a sample of how well intentioned men, who did not consult the profession as to its wants, went behind the Association and influenced members of the Medical Council to take certain steps. These gentlemen got their instructions no doubt from some well-meaning dentists, but they did not know anything of the general opinion of dentists. Mr. Macnamara's imaginary feather was not complimentary to the aspirations of the educated dentist.

Mr. D. CAUSH observed that if a pupil was to work his way up, there were times when it would be imperative for him to do mechanical work. Otherwise, however well-trained he might have been, and however well he might know the work theoretically, he would be placed at a great disadvantage. He would either have to sit in his spare time doing nothing, while he placed his mechanical work in the hands of men who might do it as they chose and not as he wished, or else he must do it himself. Of course, there were some who had nest-eggs left for them, who would not need mechanical work; but those were not the class of pupils that need be catered for. Mr. Harrison seemed to him to have sounded a real difficulty. The previous method of pupilage was very bad indeed; but if the course suggested by Mr. Pedley were carried out, it would very soon test what had been done by the pupil previous to his entering into the hospitals. What they had to contend against was the American principle. He thought all of them who knew anything of mechanical dentistry, knew that it was impossible for anyone—two, or ten men—to give time and attention to the number of pupils who go into the dental schools, and it seemed to him that the question to be solved was the one suggested by Dr. Harrison. The pupils might be requested to make one or two cases to the satisfaction of those whom they were under while at the general hospital. With regard to the matter of restricting pupils, an examination would very soon restrict them. He thought men who did not give proper attention to their pupils would very soon be known, and the pupils would very soon fall off. His own experience had been that the manipulative skill that had been developed in the workroom was invaluable to the student, whether he continued his mechanical work in after life or not. It was impossible to gain that manipulative skill unless the pupil was continuously under the influence of one individual. In the dental schools, unless a man was set aside for two or three pupils, the consequence would be that they would constantly come under fresh tutors. They had only to contrast the best dental work

in America with that in this country, and he thought nothing more need be said on the subject.

Mr. HARRISON, replying on the discussion, said he was very much obliged to Mr. Dennant for bringing forward the matter of the supplementary letters—for it was not worthy of the name of qualification, and he did not think it worth notice. He thought their proper course was to agitate for direct representation on the Medical Council, which he spoke of last year. If they had a representative man there, he would put his foot upon such a movement at once, and nothing more would have been heard of it. With regard to Mr. Pedley's remarks about the full course of study, he should like to see it voluntary, but he could not say he should like to see it compulsory, because it would come very hard indeed upon their provincial friends. It would mean a course of eight years for a dental man, which was a very expensive course of study. He did not think Mr. Turner meant that men should never enter the mechanical room.

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## ORIGINAL COMMUNICATIONS.

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### A Plea for Clinics.\*

By J. J. BAILEY, L.D.S.Edin.

MR. PRESIDENT AND GENTLEMEN,—When I responded to your secretary's request for a paper, the choice of a subject which should be acceptable to you caused me a considerable amount of difficulty. The stock of subjects seems somewhat limited, and the ground has been gone over so frequently by able speakers; nevertheless the only subject present to my mind was something in the nature of a few practical remarks respecting operative manipulation and the difficulties incidental thereto, with suggestions for surmounting them.

With these somewhat vague ideas I was fain to make an attempt, and in proceeding to jot down a few ideas I could not but feel impressed with the thought that some were of too trivial a nature to be introduced into a paper, while others were of a character of which a verbal description would give only an imperfect idea; at all events, a more permanent interest would be im-

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\* Read at the Meeting of the Southern Counties Branch held at Brighton, March 29th. The editor regrets the delay in the publication of this paper, which has been unavoidable owing to the exigencies of space.

parted and a better conclusion arrived at as to the value of the method advocated by a practical exposition.

It occurred to me that possibly there are many others who, like myself, feel that the value and interest of our informal meetings would be enhanced if we could introduce some clinics. With this thought uppermost in my mind, and with the hope that there are some present who hold similar views, and trusting that there are others who if not actively in favour of them, are passive simply because the value of demonstrations has hardly impressed itself upon them, I would now with your permission occupy your attention for a few moments while I put forward a plea for clinics.

Having given you my reasons for a choice of subject I will say, firstly, what I think would be the advantages to be gained; and, secondly, the drawbacks and abuses which would have to be guarded against, accompanied by a few suggestions as a basis upon which a practicable plan might be formed. The advantages to be derived are practical and social, and I take it that one great cause of our meeting together periodically is to lessen our insularity, and to bring out the latent talent of each and all.

I understand that our worthy secretary has experienced great difficulty at times in getting anyone to come forward with papers and (this is a difficulty, I believe, not confined to our society), it is highly probable that there are many practitioners who, while unable from various causes to favour us with papers, would be able and willing to take part in these informal demonstrations, which need not be long ones. Thus we should avert the danger of a diminishing interest in these meetings, while adding a new feature, which, however, I would not have supersede entirely the reading of papers. I feel a considerable hope that it would socially be a success by drawing a larger number of members together. Practically it can hardly fail to be of use. Collectively we are a rapidly progressive body, but individually we need to be on the alert lest we cease to advance. After a time we are apt to get into our own favourite grooves, from which it is well that we should occasionally be ejected. We do not want demonstrations of large "show cases," which often exhibit an amount of manipulative skill, but present few difficulties to be overcome, and hence are of little value educationally; but there are many little ideas existing in the brains of our fellow-workers which, if imparted to each other, would be of mutual assistance. Various

small inventions and methods of manipulation which could hardly be given the prominence of demonstration at our annual gathering are nevertheless quite as interesting as these larger operations, and perhaps more generally useful to the majority of practitioners. Moreover, these clinics—social clinics I would call them—would possess a distinct advantage over those held at the larger meetings, divorced as they would be from the excitement and confusion incidental to our annual assemblies, during which time too often one's mind is kept swaying in a pendulum-like motion from various attractions and distractions.

There we have, or should have, the absolute novelties. Here we can enter in a quiet way into the details. In the smaller clinic each would have a chance of seeing thoroughly the entire operation and of asking questions relating thereto.

The subjects chosen should, preferably, be those things we are called upon frequently to perform, and methods of overcoming special difficulties which often arise in general operative work—for instance, one point upon which I had among other things thought of basing a few remarks, namely, filling with gold a cavity caused by erosion, say on the labial aspect of an incisor or canine, where the lesion has extended somewhat below the margin of the gum. The particular difficulty here presented is to keep the cavity dry, as such a filling can only be filled cohesively, and to effect this we must keep the rubber-dam well back. It is seldom a clamp can be got to fit, and resource has to be had to a silk ligature. Here we feel the need of a third hand. Many operators obtain the help of an assistant, others cannot always command such help, and there are some of us who prefer to dispense with it. How best can we hold back the rubber (as the silk itself will not be sufficient), hold our pluggers, and do our own malleting? The methods of overcoming such difficulties are more easily demonstrated than described.

Among other subjects the following occur to me as being suitable for clinics :—Amalgam filling (often talked about but seldom if ever demonstrated), palladium amalgam, the use of anchor screws, filling of nerve canals and the best substances for the purpose. Doubtless quite a host of other points of interest are presented to your mind, and there would, I apprehend, be small difficulty in selecting a goodly number of topics.

While entertaining a strong feeling that such clinics would be a distinct advantage, I cannot but be aware that the mere holding

of clinics would present some drawbacks and be open to abuses which would have to be carefully guarded against. Clinics have before now been proposed, and it will probably be in the recollection of some present that one or two members of our profession, after advocating them, followed it up by inviting their *confrères* to their own houses to see them operate. However well-intentioned such procedure may be, it is obviously open to distinct and grave objections, so palpable that attention need hardly be called to them. I fear the result of such attempts would be to foster a large amount of jealousy, vanity and unfriendly criticism. The arrangements for demonstrations should undoubtedly be in the hands of a committee sufficiently large and representative to command respect, and to be a guarantee that the whole thing shall be carried through in such a manner as to be thoroughly acceptable to all concerned. Such a body we already possess in our executive, or, if thought preferable, a special committee might be formed; however, my inclination would strongly lean to the former.

Again, it would be small gain if these practical demonstrations were to entirely supersede the papers—rather should they accompany a paper if possible. I venture to think there are many men who would not object to give a short paper containing a brief summary of the subject they have taken up; this to be immediately followed by the demonstration itself, after which a general discussion might follow.

Having seen the methods advocated carried to a practical conclusion, members would be better able to discuss the value of the new idea, and we could with more confidence accept or reject it.

I trust it may not appear presumptuous if I add a few words suggestive of a workable scheme, so that, while all should have a voice in the choice of subjects and of demonstrators, the opinion of the majority should have the preference. A given number of subjects might be announced by the committee, or all those who are willing to come forward might intimate the fact to the Secretary, accompanied with the name of the special subject they would take up; a list being thus drawn up, a general vote might be taken, allowing as many votes as there are subjects, the subject commanding the largest number of votes taking the first place, while those immediately below might be allowed their relative position in due time. All such subjects that fail to attract a given and agreed-upon number of votes to be expur-

gated. Thus a frequent voting would be avoided, and a single poll would probably provide sufficient themes for a whole season's meetings. These are merely a few crude suggestions which may possibly be of some use in evolving a more comprehensive scheme.

One important point which has not yet been touched upon is, Where shall these social clinics be held—at the house of one or other of those of our professional brethren who are able and willing to offer the advantages of a fully equipped surgery, or at our usual place of meeting? And here I feel conscious of the weak point in this project. Numerous reasons can be adduced for and against either suggestion, but the difficulties are not insurmountable, and surely if we enter into the spirit of the thing in earnest, arrangements can be made which shall be convenient and satisfactory to all concerned. Providing that thoroughly comprehensive facilities could be obtained at the usual place of meeting, I am inclined to the opinion that it would be the more preferable alternative.

While in the midst of writing this paper I saw a letter in our Association Journal, written by a Brighton member relative to our meetings, or rather our non-meetings, a perusal of which makes it evident that I am not altogether alone in thinking we need some stimulus. If I may be allowed a few words in the nature of a reply to a Brighton member's letter (as it touches upon the matter under consideration), I will, with your permission, say that while agreeing with him as to the need of some stimulus to our flagging energies, I can hardly agree with his proposed remedy. Upon the surface it appeared as if his proposal would cause innumerable and undesirable sub-divisions, but, on looking into the matter more closely, I perceive that the adoption of his suggestion would leave matters in much the same state as they now are, for his project of forming sub-divisions in such towns as contain six or more members would remain inoperative from the simple fact that, with the exception of Brighton, there is not one town which can boast of six members of our Branch. Personally, I should be sorry to see any sub-division of our Branch, but if it were considered advantageous, I imagine that one division for each county would give a sufficient number of centres. I have not the shadow of an idea who the correspondent is, or if he be present to-day; but if present I trust he will take these few remarks in the friendly spirit in which they are meant.

Gentlemen, I do hope you will think it worthy of consideration whether some new features should not be introduced to keep alive and stimulate the interest of, not the executive merely, but also of our individual members, and to overcome what bids fair to be a chronic difficulty in getting gentlemen to prepare papers. In conclusion, I beg to thank you for your kind attention, and the patience with which you have listened to these few remarks, somewhat desultory, I fear, but I venture to express a hope that they may lead to a thorough discussion of the subject.

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### Gold Crowns.\*

BY F. J. VAN DER PANT, L.D.S.I.

ALTHOUGH my experience in the working of the above is not great, it has been sufficient to prove to my entire satisfaction the manifold advantages secured by this method, as well as the permanent nature of the work when skilfully carried out. For instance, a tooth which in the old days would have been condemned and probably extracted, may now be given a long lease of life and usefulness, and may be restored to more than its original beauty of form. I am alluding more particularly to molars, although incisors and bicuspidis are equally within range of the same transformation.

In this short paper I will allude only to the treatment of molars and it would seem that in all ordinary cases success is assured, all future mischief which so frequently is noticed after the insertion of a gold filling being by this method absolutely avoided, by means of the golden envelope which embraces every part of it. My *modus operandi* is as follows: The tooth to be crowned is prepared in the ordinary way as for stopping, but in addition the whole of the masticating surface must be cut away, and the cervical portion of the tooth trimmed down when necessary, and all excrescences from tartar or other causes removed. A piece of fine silver wire is stretched over the tooth until the margin of the gum is reached; then with a pair of fine-pointed pliers the ends of the wire are grasped and twisted round until the wire fits

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\* Read at the Meeting of the Southern Counties Branch, held at Brighton, March 29th.



every part of the neck. I next remove the wire from the tooth, cut off the twisted ends, straighten out, and cut a band of 22 carat gold the same length as the silver wire, and about the breadth of the original crown—if anything a little wider. If thought desirable, a model may now be taken of the tooth under treatment, and the gold collar adapted to it before soldering; it is then passed over the tooth *in situ*, and with suitable instruments closely worked down and round the neck; then passing just below the gum, the end of collar being filed to an edge, the next process is to fill up the coronal surface with wax, and effect the articulation with the opposing tooth, taking care to observe that the bite all round the mouth is true.

When the wax has been hardened, an impression is taken in stent of the collar and wax crown, as well as one or two of the contiguous teeth, and the jaws again brought into apposition. It is then carefully removed, the collar coming with it, and cast in plaster of Paris, as well as the “overshot” for bite. A zinc die is then taken with lead matrix, in the ordinary manner. A pattern is taken of the crown as it appears in the plaster cast, and a piece of 22-carat gold somewhat thicker than the collar is cut to shape, and struck up between the metal models. It is then neatly soldered to collar, filed up and polished, and when placed on the plaster model will be found in apposition with bite already taken.

It is now ready for fixing in the mouth, and after first placing it in position to assure the accuracy of bite, I drill a hole in the centre of the gold crown to allow of the escape of superfluous cement, the mouth being dried and “papier Josef” placed on either side of gum, which is kept in position with the forked bivalve saliva ejector. My assistant mixes the compound—Richmond’s monogram cement—to the consistency of cream; as rapidly as possible I apply it to the attenuated crown, and fill up interior of its restored successor, and press gently but firmly into position, and then, with a slip of thick, articulating paper over surface, effect the closure of the jaws, taking care that each tooth meets as before. This is only for a moment; the paper is removed, and it will be found during the setting process that the artificial crown is in exact apposition with its articulant. It is better to exclude all moisture for five minutes, which can be done by applying fresh slips of the absorbent paper or covering with wax. It only now remains to close the escape hole with gold in the

form of an ordinary crown filling, which I insert when practicable at another sitting, the cement within the body of the crown taking some time to set dead hard.

The work is now complete, and the result in most cases all that can be desired. I usually paint the margin of gum all round with the tincture of aconite and iodine, to prevent any irritation to the peridental membrane through the sudden pressure of the cement. This seems to remove the only risk of failure. Of course the same need for avoiding exposure of pulp is required as in the case of any ordinary filling, and dead teeth will be treated in the usual way with respect to root dressing and filling. It is sometimes advisable to drill sinuses to admit of the escape of gases which might otherwise accumulate and cause mischief. On the whole I must admit, however, that I prefer living teeth to dead ones, as it renders the operation much less complicated and the result more certain.

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#### Dental Education.\*

By WALTER HARRISON, L.D.S.Eng., D.M.D.Harv.

At our last annual meeting I had the pleasure and privilege of presenting to this Association a few notes upon dental education. Owing to pressure of other matters, the time was limited for the discussion, which was postponed, and to-day is the first opportunity that the subject could be brought forward. Your worthy secretary asked me to re-introduce it, as so many changes have taken place, and I have the unique chance of reply to some of the points that I referred to in passing last year. So with your permission I will briefly run over a few items.

A dental school in connection with a medical one—Guy's—was announced, and has now become an established fact, with a satisfactory number of students, and last month over 1,000 operations were performed. Another lectureship on operative dental surgery has been founded, and the Royal College of Surgeons instruction in chemistry, materia medica, and an examination in mechanical dentistry are demanded.

Changes have taken place in the curriculum for the L.D.S.Eng.

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\* Read at the Annual Meeting of the Southern Counties Branch held at Kingston-on-Thames, June 21st, 1890.

Of the original eleven regulations, four have been altered or rearranged, and the number reduced to ten—the omission being attendance at a second course of anatomy.

The additions and alterations are briefly as follows :—twelve months' dissection instead of nine ; three months' practical physiology and instruction in chemistry and materia medica, which may be taken before registration.

"The tendency of these changes," says the editorial of the *JOURNAL OF THE BRITISH DENTAL ASSOCIATION*, Nov., 1889, "will be to bring the dental curriculum more into accord with the first part of that for the conjoint examination for the M.R.C.S. and L.R.C.P., and thus place the dental student, as far as the first half of his studies are concerned, on a complete level with the general medical student. This, we need hardly say, has always been the desire of those who are engaged in promoting dental education."

In the examination some very important changes are to take place ; the present regulation stands thus :—

The examination is partly written and partly oral. The written comprises general anatomy and physiology, general pathology and surgery, dental anatomy and physiology, and dental pathology and surgery.

At the practical examination :—

(a) On the treatment of dental caries, and may be required to prepare and fill cavities with gold, or plastic filling or material, or do any other operation in dental surgery.

(b) On the mechanical and surgical treatment of the various irregularities of children's teeth.

(c) On mechanical dentistry.

The oral examination comprises the several subjects included in the curriculum.

The new regulations, on the whole, we must hail with great satisfaction, and notably the practical sections in the examinations and I trust all the authorities who grant the L.D.S. will demand a similar course of study and test of knowledge and ability.

There are several points in the dental course of study I should have liked to have heard discussed ; but to-day I must confine myself to one branch only, viz., mechanical dentistry.

Mr. David Hepburn said at his introductory lecture :—"Theory without practical knowledge in most departments of work is a dangerous thing, but I think this specially applies to dental

mechanics, which can never, from the varying nature of the oral structures, be an exact act, and the practitioner who has neglected practical work in the workroom and relies upon theoretical knowledge gained from books, or upon his own fancied ingenuity, will be constantly creating difficulties for himself and his patients by endeavouring to carry out in practice ideas which appear theoretically good, but which are practical impossibilities . . .” Further, in acquiring an intimate and practical knowledge of dental mechanics, you will, so to speak, be able to command your own workrooms.

Mechanical dentistry has never stood on so firm a basis as at the present time. Some time ago there was a suggestion for separation, but to-day we find the various schools are instituting more thorough training, and the Royal College of Surgeons demands a searching examination.

The question that now arises is, how best can dental mechanics be taught? By continuing the present system of private pupilage, or creating opportunities at the schools. If we look at the calendars of the various educational institutions, it will be seen that they have anticipated the Royal College of Surgeons; for to the Maternal Dental College credit must be given for making the first advance in giving practical demonstrations. At Guy's Dental School practical demonstrations are given, and suitable cases found in the hospital to enable students to add to their experience in constructing and adjusting artificial teeth, and now the London Dental School authorities have advertised for a mechanical demonstrator at a stipend worthy of that institution, and a guarantee of securing a responsible man; and in addition to this a scheme is shortly to be announced whereby poor patients will be able to be supplied with artificial dentures. This will, of course, afford students and teachers every opportunity of advancing the standard of mechanical dentistry.

Whether the innovation of dental mechanics at the various schools will eventually do away with private pupilage, it is premature to say. There is not the slightest doubt but the present system is very defective, and there is no check upon the indifferent preceptor or idle pupil; practitioners often take more pupils than they can properly instruct; again, they are often left to the mechanical assistant to gather what information and instruction they can. How many men permit pupils to take models of bites, or even show them how such should be done at the chair side?

These are important points to the student, and dentists who make the premiums of pupils a part of their income have a right to teach them properly. Hospital authorities and examiners have announced their intentions of a change, and if apprentices become a thing of the past, those who aided such movements by their indifference must not complain if their returns thus suffer.

Personally, I am strongly in favour of private pupilage, supplemented by a hospital course, as I fail to see, after an experience of both systems, how so great a variety or high standard of work can be done at a hospital as in private practice.

The hospital study possesses many valuable points ; students must be industrious ; they will be instructed in what they will later on be examined in ; they will receive more thorough training in what is undertaken ; working together creates friendly rivalry and pleasant competition. Hence my desire to see a combination of both systems.

Mr. Henry Weiss put the case forth very ably in the *Dental Record*, April, 1890.

Inasmuch as the London Dental Hospital have not yet evolved their scheme, one is unable to make any comments upon it, but I do feel that what it and Guy's school are trying to do, namely, improve the standard of mechanical dentistry, and at the same time supply the necessitous poor with that which has so far been debarred from them. We ought, in justice to those who have undertaken so difficult a task, to help them all we can ; let us take broad views, and make our criticisms kind and generous, and put as few obstacles in their way as we can.

The scheme will entirely upset all present arrangements, and the hospital hours will have to be lengthened, and throw heavy burdens upon those at the helm.

The three years' instruction in mechanics cannot be reduced, being already a short period to become competent under the most favourable circumstances. I should advocate three years' private pupilage, a practical examination on entering the hospital, and every student to take up a certain number of cases to be wholly done by him to the satisfaction of the staff, before being allowed to present himself at the Royal College of Surgeons.

To supply artificial teeth to the poor is a matter that *can* be arranged in those centres where educational establishments exist ; but unfortunately the poor are to be found everywhere, and it seems to me it would be a noble deed if some means could be

created, by the which this charitable idea should be extended all over the kingdom. Surely a large committee formed by representatives out of all the branches would be able to make some suggestions.

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### Presidential Address.\*

BY AMOS KIRBY, L.D.S.ENG.

It is customary in this Association for the President to vacate the chair at the end of his year of office, and in doing so to introduce his successor with a valedictory address. I have, however, fulfilled my duties in such an unsatisfactory manner that I find myself referred back to work for another year like an unsuccessful student. I hope during the present term to fulfil my duties better, and thank you for the compliment you have paid in re-electing me, although I very much wish that the office had fallen into other and better hands.

In addressing a few remarks to the Association I do not propose to occupy your time in reviewing the work of the year, nor to offer any comments upon special methods of practice. There are, however, some subjects more or less connected with our work which are so interesting and important that I think they are well worthy of our consideration. We are constantly asked by our patients or their friends—"What is the reason for the great increase of decay amongst the teeth of the rising generation?" and this is often followed by another enquiry as to whether imperfect teeth are an indication of what is called a weakly constitution?

There is little doubt that the increase in the number of decayed teeth to be met with is, greater than the increase in the population would account for. And I think a little consideration will enable us to arrive at a conclusion which is not without some foundation.

The Registrar General's reports suggest that some part at least of the increase in population, is due to the increase in the average length of life amongst us, and this increased length of life appears to be in a considerable degree, due to the diminution in mortality amongst infants and children of tender years; in other words, that in consequence of improvements in sanitary and medical sci-

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\* Read at the Annual Meeting of the Eastern Counties Branch at Lowestoft, June 25th, 1890.

ence, a considerable number of infants survive the diseases and dangers of childhood, who would formerly have succumbed to them. As the children who would have gone to the wall were certainly the weaker ones, it follows, that we have added to our population every year and amongst all classes of the community, a considerable number of people, who, if not actually weak, may be looked upon as scarcely equal physically, to those who used under harder circumstances to fight through the battles of childhood. And if in the next generation we have children who are the offspring of two such parents, we may expect to find a somewhat greater lowering in tone ; from which lowered tone we shall probably trace a tendency to increased dental decay. Bad teeth alone without any other weakness would be a disqualification to an uncivilised man in fighting the battle of life, but it would appear to be tolerably certain, that a race with imperfect dental organs, may under the circumstances of higher civilisation, more than make up by mental power and activity for this physical weakness. Yet it is doubtful whether in such a case, a vigorous and energetic race would be perpetuated, without the occasional infusion of a rougher and harder element. Perhaps, no fact is better recognised, and it is well expressed by Dr. O. W. Holmes, who says that the son of the costermonger would have the better in the struggle with the son of the professor notwithstanding his advantages. I think there is evidence to shew that wherever conditions have interfered with Nature's processes of selection, which ensure the survival of the strongest only, there we shall find an increased tendency to dental decay.

It appears to be impossible to rear a healthy race under the unfavourable influences to which children are exposed in populous cities. It is proverbial, that most of the people who "get on" in such places, or their immediate ancestors, have gone there from the country. It is said that poor families in London die out entirely in three generations and that *no* person can be found whose four grandparents have spent their lives in that great centre, and the same remarks apply to most large manufacturing centres. It is, therefore, of the highest importance that a healthy and vigorous rural population should be maintained, and that the present tendency to concentration in large towns should be discouraged and in every possible way counteracted. Amongst the poor in cities, the process of selection means simple starvation, and if we look at the feeble development, both physical and

mental, of many of the children, especially such as find their way into public institutions, we cannot possibly shut our eyes to the probable course of events. It is often said that people were stronger formerly because they were hardened and made more healthy by exposure to cold and other hardships ; but this is only half the truth—the other half being that only those who were very robust could survive the treatment to which they were exposed ; consequently, every individual who grew up to manhood, was the hardy offspring of hardy parents, and would be possessed of thoroughly sound organs.

In connection with this subject, though not forming a part of it, it is interesting to note changes in the race which have taken place in recent times, for which it is not easy to offer an explanation. From common observation we appear, on the whole, to have grown taller lately—a process which has gone on slowly since Roman times, although some stone coffins of an early date—such as those built into the wall of Bakewell Church, in Derbyshire—were evidently made to hold people of very goodly stature. On the other hand, the average size of our heads appears to have grown smaller within the last fifty years. A paragraph quoted from the *Scotsman* newspaper first directed my attention to the matter, and enquiries of hatters in widely different parts of the Kingdom, elicited the fact, that the average sizes of hats sold now, were much smaller than formerly, and that there was but little difference between those required by different classes of the population. A skull which I have seen recently—and which was supposed, from the coffin containing it, to have belonged to a bishop of the twelfth century—represented a head of the average size of those common forty years ago.

I believe there is another cause for dental degeneration, in addition to those suggested, and which has not received very much attention. I allude to the influence of a climate which may be unsuitable to a special race. The Anglo-Saxon prides himself on his adaptability to any region, and a well-developed man evidently has this power of accommodation, but there is reason to think that his posterity cannot continue to reside for many consecutive generations in some places without undergoing deterioration. The children of English parents born in India, often possess fairly good teeth ; we do not often see the teeth of children whose parents and grandparents have spent their lives there ; but Mr. Lloyd, who practised in that country for several years, describes



them as being deplorably bad, and I have seen cases which confirm his statement. Mr. Lloyd also states that the *natives* of Hindostan, like all dark-skinned races of pure descent—who may represent special climatic selection—have perfect teeth which are free from disease. Most of us will recognise that the children of English people born at the Cape, as well as the descendants of our race in America and Australia, have less excellent teeth than our own. The daughters of the Boers, whose ancestors have lived long at the Cape, are said to lose much of their notable beauty as soon as they open their mouths. The bad condition of the teeth amongst the Romans may have been to some extent due to the fact, that this people was composed of elements collected from most various quarters of the globe; to many of whom the new climate may have been very uncongenial.

Doubtless the kind of food with which we are nourished, especially during early years, has much influence on the strength of every part of our bodies, but the limits within which the inhabitants living in any climate may select a healthy diet are exceedingly wide. Some of the half-castes of the Argentine Republic maintain a high physical condition in a warm climate on an entirely animal diet and much exposure to atmospheric influences; whilst their near relatives who live in towns and feed on daintily prepared viands, are much less strong and suffer considerably with their teeth. On the other hand some of the African and Indian races maintain great vigour upon a diet which is almost entirely vegetable. A *purely* vegetable diet seems on the whole to be decidedly undesirable, even leguminous food proving to be unsatisfactory without the addition of some animal matter. Count Rumford found that he could keep large numbers of people in good health on a stew composed of vegetables with the addition of a very small quantity of meat.

Mr. Mummery, to whose able papers I am much indebted, tells us that animal feeders, in addition to having excellent teeth have great reparative power in those organs; the pulps usually becoming perfectly calcified when they are subjected to wear. It is possible that the exact form in which we take nutritive substances, may be of much consequence, and that the addition of foreign substances to bread may have an injurious influence. Probably the best form in which we can get that excellent food is the one prescribed for the use of the prisoners in our jails, which, unlike any other, is made upon really scientific principles. After considering all these

various influences, we can only look upon them as forming *parts* in the system of selection of the fittest, and I will endeavour as briefly as possible to show evidence in favour of this idea of selection, from the dental history of some portions of the human race.

We know nothing of the history, or of the teeth of our earliest predecessors, who it is supposed were occupants of this country before the glacial period, and possibly more than 200,000 years ago. The ancient Egyptians are probably the earliest people of whose teeth we know anything; and concerning some of these it is said that of many thousands of their mummies examined by Prince Radzerill, there was not one with a tooth missing or decayed; a statement suggesting the idea that good teeth may not be incompatible with some forms of civilisation. Mummies examined by other observers, have shown a much less satisfactory condition, but the periods represented by these remains may have been very widely different, and may represent a deteriorated race. Many of the ancient Britons had excellent teeth, but amongst them some were not so good, and they appear to have fallen off considerably under the influence of Roman civilisation, accompanied probably by less hardy living. Of the Romans we know something from their remains, and we gather from their writings that during the later period, bad teeth were an every day matter. We also know, that many of them lived in much luxury and free from influences which would produce a vigorous race. Amongst other indications of the frequency of dental mischief, are the laws which specially allowed gold, used in repairing these defects, to be cremated with the bodies. The writings of Martial also make constant allusion to what was evidently an every day matter. One of my classical friends has kindly copied for me some of these epigrams of 1,800 years ago, which, if not new to us, are always interesting, so I will read them without apology:—"Thais has black teeth, Lecania white ones. What is the reason? This has bought ones, the others are her own." Several other passages show the commonness of artificial teeth. "You use bought teeth and hair and are not ashamed, what will you do for your eye, Lœlia?" In another, tooth powder is made to say to artificial teeth, "What have I to do with you? Let a girl take me. One does not usually polish bought teeth." We cannot give a better description of a deplorable dental condition than is contained in the two following quotations:—"You, Maximina, are not a girl, and you have three teeth left, but they are the colour of *pitch* and *boxwood*; therefore,

if you trust your mirror and me, you should fear a smile as much as Spannius fears the wind." The other is not much less cruel: "If I remember rightly you had four teeth, *Ælia*; *one cough spat out two* and *another two*. Now you are secure for the whole day, the third cough has nothing left for it to do."

The Anglo-Saxons appear to have been much better off than their immediate British predecessors, but whether their condition remained as good under increased civilisation, it is impossible to prove. Probably it was not so; for the wealthier ones are said to have lived as well as "any modern Englishmen." Amongst many others extant, I have a lower jaw bone found in association with Roman remains, which belonged to an old woman of this race, who had evidently lost her molars and bicuspid many years before her death, whilst the remaining teeth were in a very infirm condition. The skull of a man buried in the same grave, had teeth perfect in number, all worn down to the level of the gum, but with a perfect growth of secondary dentine closing each one of the pulp cavities most perfectly. I have also seen associated with square-jawed perfect-toothed skulls of Saxon males, the skull of a woman whose teeth were in an exceedingly bad condition of decay, and along with them were found the lower jaws of two children, whose unerupted lower molars were marked with the crucial fissures so commonly to be found in the teeth of children at the present day. These remains suggest, that possibly the extinction of a race unequal to the requirements of the times, was actually in process of completion.

At a much later period, the conditions of life amongst our forefathers were still very hard and unfavourable to the survival of delicate children. Old mansions in the fourteenth century had for their only room the hall, which was open to the roof and with its open fire-place, was cold and draughty even after the smoke-hole was replaced by the spacious chimney. The women only, had a bedroom, other inmates slept upon the floor, lying on heaps of straw or leaves of fern. In Chaucer's time, the men enjoyed the luxury of the soft boards of the oaken table-top. The master had a separate bed-room and only later were separate rooms provided, on one side of it for the men, and on the other for the women of the house.

Amongst the modern races Mr. Mummery found the smallest percentage of decay amongst the flesh eating Esquimaux and I think if we look at the conditions under which they exist, we shall

conclude that an active process of selection must take place in such a climate;—a delicate person could not exist. In point of tooth excellence they are followed very closely by the New Zealanders and the Indians of the West Coast of America, who are or were exposed to very great hardships. Next the Fuegians, some of the Australians, all of them lately cannibals, have good teeth; Africans of the West Coast, Ashantees, Dahomians, Zulus, Kaffirs, are happy in this respect, as are the Arabs of the desert and other nomad tribes, all of whom may be said to live a hard life and almost entirely in the open air.

The weaker teathed races mentioned, are the Eastern Polyne- sians, who with fairly good physique, have comparatively civilised habits and surroundings; also the fat and flabby Sandwich Islanders, many of the South Americans, the improvident Australians, alternately feasted and famished, together with the weaker races of the African continent. Amongst the more civilised peoples, Mr. Mummery mentions the Northern Chinese and Northern Indian races—living on simple diet in a cooler climate—as having better teeth than their southern compatriots in warm districts using less wholesome food. He also alludes to the difference between the teeth of the people occupying the healthier Alpine valleys and those in the bad and marshy districts, where cretinism is a prevalent condition.

All these instances indicate that good teeth are produced by exactly the same conditions which bring about a healthy condition of the race; the chief of these being some kind of natural selection; a process which is constantly going on in all classes—more slowly amongst the comfortable and prosperous, and more rapidly amongst those who are exposed to greater hardship.

That some action of the kind does take place at all times, is also suggested by the entire extinction of large and well-to-do families, even in country districts. Mr. Baring Gould, in his "Old Country Life" mentions several of these, as having occurred in the West of England. In 1721, there were twenty-eight men of the Conti family; a century later, not a descendant remained. In 1620 a Mr. Gould left seven sons, who had expanded into a large family in 1701; only one unmarried man of fifty now remains.

The High Sheriff and Grand Jury of Devon, in 1660, was composed of twenty-one members of the Hill family, all men of substance and quality; of whom *no* descendant now remains.

In "Fuller's Worthies," Sir Thos. Temple's wife is mentioned as having thirteen children, and living to see 700 descendants, of whom it is doubtful if there is now a single male representative. On the other hand, the twelfth Duke of Norfolk found that his ancestor, who died on Bosworth Field, had 6,000 descendants left, when he wished to collect them together. Of course, much more could be said apropos of the subject, but I have already detained you too long.

Practically, we have very little power and very little real influence in the matter. We can do something to repair nature's defects where they occur, and so assist in maintaining the vigour of the individual, and to that extent, of the race as well. We can also take every opportunity of urging the paramount necessity there is for children and young people, to have the greatest possible amount of fresh air and suitable food, together with a good amount of healthy exercise, which gives mental rest, and counteracts to some extent the mental strain to which we are all now exposed.

As to the question of constitutional weakness, we can safely say that dental disease may be the result of temporary and accidental causes, and need not necessarily indicate any other weakness in the person who is its subject. There does not at present appear to be any fear of our race failing, either from want of physical or of mental vigour.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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### Liverpool Dental Hospital.

A NUMEROUS company of the supporters and friends of the Liverpool Dental Hospital assembled there, under the presidency of Sir James Poole, the chairman of the institution, to inaugurate the new filling room for the conservative treatment of dental cases, recently fitted out at the cost of several friends of the late Mr. T. F. Brakell, who was honorary treasurer of the hospital for eleven years.

Sir JAMES POOLE said they were met to do honour to the memory of their late colleague, Mr. Brakell, and to formally open the new filling room, which was dedicated as a memorial to that gentleman, and which would add largely to the usefulness of the hospital both as a means of giving aid to the poorer portion of the community as well as

being an excellent school of dentistry for students. He observed that by the statistics the operations had increased from the small number of 800 in the year the hospital was first instituted to 34,000 last year, showing the need there was of such an institution. He announced the pleasure he felt that their good friend, Mr. H. C. Quinby, had offered the handsome donation of £20 per annum for the next five years as a prize fund to successful students. Sir James Poole then declared the addition to the hospital open, and dedicated it to the memory of Mr. Brakell, who, he added, had devoted much time and energy to the interests of the hospital.

A vote of thanks to the chairman was proposed by Dr. DAWSON, seconded by Mr. C. ALDER, and carried unanimously. Among those present were Dr. Waite, Messrs. J. Wannop (hon. treasurer), W. L. Jackson (hon. secretary), R. Edwards (dean), H. C. Quinby, James H. Goodyear, Thomas K. Holden, Charles Alder, J. R. Cassell, J. G. Gemmell, H. E. Brakell, J. V. P. Newton, W. J. Pidgeon, H. Newton Hindley, J. R. R. Scott, R. H. Bates, Alderman E. Grindley, R. I. Powell, M. Alexander, W. Mapplebeck, A. W. Brakell, C. J. Brakell, T. R. Guyler, T. C. Dopson, R. M. Capon, J. Norris (house surgeon), William Hitchon, J. H. Burroughs, and W. Gaskell.

## MINOR NOTICES AND CRITICAL ABSTRACTS.

### International Medical Congress, Berlin, 1890.

THE following resolutions were passed at a recent meeting of the General Committee:—

1. All notices regarding general addresses, reports, subjects for discussion, or papers should, as far as possible, be forwarded to the General Secretary by June 10th, in order that they may be announced in the general programme to be issued before the Congress. Communications sent in later cannot be included in the programme, and cannot be announced until the commencement of the Congress.

2. Promises of communications, and announcements by those wishing to take part in discussions, should be sent in as soon as possible to the officers of the Congress, Berlin, N.W., Karlstrasse, 19. Information on the part of those intending to be present is of especial importance, for the general arrangements and notices, and invitations can only be sent to those who have announced their intention of attending.

3. It is requested that home and foreign members will obtain their tickets beforehand, by sending the subscription of £1 to the Treasurer, Dr. Bartels, Berlin, S. W., Leipzigerstrasse, 75. By this means members will be spared trouble and loss of time at the commencement of the Congress, and the list of members can be made complete and accurate from the first. It is further recommended that members should secure their lodgings as early as possible. Applications re-

garding rooms should be sent to the Wohnungscomité, Karlstrasse, 19, Berlin, N.W.

4. Although the functions of the organising committees cease with the opening of the Congress, when the direction will be assumed by the Sections themselves; yet, in order to make provision for continuity in working, it is advisable that a committee should be nominated for each section, as in this way only can an orderly conduct of the business be ensured, without trespassing on the authority of the Honorary Presidents, to be elected later. To fulfil this object it is requested that each section will secure at least two secretaries capable of translating German, French, or English, into their native tongue. Sections in which a large amount of business will be transacted should be careful to secure sufficient assistance of this nature, and the practicability of obtaining members capable of speaking other languages, especially Italian, Spanish and Russian, is to be borne in mind, since the regulations allow these languages to be used in discussions, provided some one be present to render the gist of the speaker in one of the official languages. In order to ensure the success of this secretariat, it is hoped that members of the Provisional Sectional Committees will assist in concerting the succession of business.

5. With regard to the Honorary Presidents, it is specially pointed out that under no circumstances are such officers to be nominated before the commencement of the Congress. At the first meeting in which each Section is constituted such officers are to be chosen from the members present, and the nominations communicated by letter to the central office of the Congress.

6. All speakers and reporters are reminded that they are required to bring a short abstract of their speeches with them. They are to be legibly written in one of the official languages of the Congress, on one side of the paper only, and ready for printing. Manuscripts handed in at the termination of the Congress cannot receive consideration. Only those communications can be included in the business which are read either by the author himself or a special deputy. Papers sent in beforehand to the Secretary in the absence of the author or a special deputy will be passed over.

Sectional dinners will arranged be to take place on a day to be determined by the General Committee. These dinners will all take place on the same day, and will be organised and presided over by the official committee of the Section. With a view to prevent unnecessary expense, the maximum price will be fixed at 10s., wine not included. Ladies may be present at these dinners. It has been arranged that special ladies' tickets shall be issued to the relatives of members. These will admit ladies to all such meetings as may be suitable for their attendance. For foreign members there will be no subscription. German members will pay a subscription of 10s. for such tickets.—*The British Medical Journal*.

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### The General Medical Council and the Dentists.

A CORRESPONDENT writes: The resolution passed at the recent meeting of the General Medical Council, namely, "That it is the opinion of this Council that with the object of raising the status of

registered dentists, facilities should be afforded them by the medical authorities of obtaining such additional titles after sufficient examination as are mentioned in Sub-section 6, Section 11 of the Dentists Act," has been supported by Mr. Macnamara and those who sympathise with him, with a view to enable the various colleges to confer upon dentists after sufficient examination one only of the conjoint diplomas, such, for instance, as the M.R.C.S or L.R.C.S. only, without the licence of the College of Physicians. I venture to hope, however, that the various Royal Colleges will do nothing of the kind, for the issue of such "fragmentary diplomas" can only lead to confusion in both the public and professional mind. The Royal College of Surgeons of England has quite recently enlarged and altered the curriculum for the Licence in Dental Surgery in so thoroughly a professional spirit as to enable and encourage the dental student to take the conjoint diplomas in addition to the dental licence, and I am decidedly of opinion that it is better to act on these lines rather than to grant a diploma that does not allow its possessor to place himself on the *Medical* in addition to the *Dentists' Register*. By all means encourage the raising of the status of registered dentists, but the dentists are doing that for themselves; their status is rapidly improving; indeed, I doubt if any body of professional men have ever improved with greater strides; but allowing them to register on their *Register* any diploma save their own that they cannot also register on the *Medical Register*, will, I venture to think, be shortsighted. Mr. Macnamara does not say by whom he has been asked to bring the matter forward. The question has not been before the Representative Board or Business Committee of the British Dental Association, and must have but few supporters; it would be better that any scheme of this sort should have the support of that Association. The medical authorities of Great Britain should decide to act together in the matter, and refuse to grant a diploma such as was contemplated by the mover of this resolution. The dentists, I am quite sure, do not desire any special exceptions to be made on their behalf, or to wear "feathers in their caps," but are quite content to take additional diplomas on the same terms as ordinary medical practitioners. I would point out that such examinations as the one contemplated would not be visited by the General Medical Council, and could easily become a farce; for if a single diploma is to be given at all, it must be given to all who apply for it. I venture to think that the conjoint Colleges of England will not grant such a diploma; and I am quite sure the dentists of England require no such exception.—*The British Medical Journal*.

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### The President's Conversazione, Royal College of Surgeons.

MR. JONATHAN HUTCHINSON (with whom was Mr. Trimmer, the Secretary) received a large number of Fellows and Members of the College and many other distinguished guests, at a brilliant and most successful *conversazione*. The full resources of the Museum and of the College apartments were utilised. Very interesting demonstrations were given by Mr. Poulton, F.R.S., and others on Colour in Courtship of Animals and other topics. Some specially interesting



exhibits illustrating modifications of colour were made in the Council Room, and a permanently valuable document referring to some of the chief treasures of the Museum was presented to every visitor. Music and creature comforts were liberally supplied by the President to minister to the lighter material pleasures of his guests, and Professor Stewart's remarkable powers of exposition rendered the visit to the galleries peculiarly interesting even to the least scientific of the guests and the large parties of ladies who followed him in his interesting and able descriptions. The evening was an unqualified success—notable among many similar events in the history of the College.—*British Medical Journal*.

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### Proprietary Medical Preparations.

At a quarterly meeting of the Society for the Study of Inebriety, held on Tuesday, July 1st, the President, Dr. Norman Kerr, read an abstract of a report presented to the American Society on "Nostrums." A considerable number of reputed "cures" for alcoholic and opiate inebriety had been analysed. All were found to have alcohol present in substantial proportions, one specimen being as rich as 49 per cent. Of the "opium cures," there was opium or morphine in all save one, which contained no gold, though professedly a gold preparation. Dr. H. W. Williams, Mr. F. J. Gray, of Walsall; Mr. Jabez Hogg, Mr. William Gourlay, Mr. L'Oste and Dr. Paramore took part in the discussion, which resulted in the adoption of a resolution to the effect that, as much inebriety was caused by the use of alcohol and opium under the insidious form of patent medicines and so-called "cures," the meeting was of opinion that no proprietary medical preparation should be sold unless its exact composition were printed on the cover.—*British Medical Journal*.

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### Hypnotism and Suggestion.

PROFESSOR BERNHEIM, of Nancy, gave an interesting demonstration at the Hôtel Dieu, in Paris, a few days ago, of the possibility of suggestion without previous hypnotism. The experiments were performed in the presence of many leading members of the medical and legal professions and several distinguished literary men. Professor Bernheim was able to elicit from patients, to all appearance in the full possession of their senses, confessions of imaginary crimes, which were confirmed by the suggested testimony of other subjects. He is said to have made them weep or laugh as he bade them, and to have struck them dumb or motionless at will, playing on their nervous system as on an instrument. It is comforting to be assured by Professor Bernheim that the number of persons whose "stops," as Hamlet says, can thus be governed is exceedingly limited. Possibly when the proceedings are reported in the dry language of science the thaumaturgic element will be less obtrusive than it is in the accounts which have appeared in the lay press.—*British Medical Journal*.

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### Death from Nitrous Oxide.

THE first death in Canada under nitrous oxide is reported from Montreal. A man aged twenty-four went to the office of a dentist to have a tooth extracted, and requested to have nitrous oxide administered. After assuring himself that the patient was not suffering from heart or lung disease, the dentist administered the gas. No sooner had the tooth been extracted than the patient gave a gasp and fell over in the chair. He was placed upon the floor and artificial respiration performed, but without restoring animation. The patient was not under the influence of liquor, and five hours had elapsed since last taking food (breakfast). The purity of the nitrous oxide was tested shortly after the accident by the President of the Dental Association, Dr. Beers, who himself inhaled it from the same inhaler. The verdict of the jury was that the man died from syncope, caused by the administration of the gas, and they exonerated the dentist from blame.—*Lancet*.

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### Medical Defence Union.

AT the instance of the Medical Defence Union, with the sanction willingly afforded by the Master and Wardens of the Society of Apothecaries, proceedings were instituted against a man named Joseph Abbott, of Exeter, for unqualified medical practice. On May 1st, a few days before the case was down for hearing, Abbott paid £60 penalties into court, together with costs amounting to £5 5s. 6d. The Union has also been instrumental in obtaining redress for Dr. W. Y. Martin, of Walkden, who, after the death of a woman whom he had medically attended, was repeatedly threatened with personal violence by the husband, a fishmonger. After the issuing of the summons, the defendant, through his legal adviser, apologised. He was bound over to keep the peace for three months and to pay the costs.—*British Medical Journal*.

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### A Palatable Laxative.

MAKE a strong concentrated infusion of senna leaves ; strain this through a muslin cloth, and boil in the strained liquid as many *prunes* of good quality as can be well boiled in the quantity of infusion. Stew the prunes in the liquor thoroughly, in the same manner as if for the table, properly seasoning. When well cooked put in a glass jar, screw the top down tightly and set in a cool place. Two or three or four of these prunes eaten during the day will overcome some of the severest cases of constipation. There is no suggestion whatever of the senna in the taste of the prunes, and the effect is most desirable. If taken at bed time, when a laxative is desired the bowels will move nicely in the morning. They can be taken on the most sensitive stomach, and when other laxatives would produce undesirable results.—*Chicago Med. Times*.

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### Death after the Inhalation of Bromide of Ethyl.

A SOMEWHAT important case is now before the Berlin courts, in which a dentist is charged with having caused the death of a patient by means of an anæsthetic. The patient was a lady, and the dentist entrusted his pupil, whose age was under seventeen, with the administration of bromide of ethyl. Of this about an ounce was administered, together with four or five drops of chloroform. The patient is stated to have recovered completely from the effects of the anæsthetic, and to have felt quite well during the remainder of the day. The next day, however, she died, and a commission of medical experts has been directed to report upon the matter.—*British Medical Journal*.

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### The Physiological Effects of Kola Nut.

WHILE travelling in the Vosges, Lapieque experimented with kola nut and caffeine, and has recorded his observations. According to the author, given the same conditions, the results furnished by the two substances are practically the same. Kola nut, therefore, in the opinion of the author, does not differ in its effects from caffeine. It is necessary, however, to use smaller quantities of the former, as it contains thrice the quantity of the latter.—*The Medical Press*.

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## REVIEWS AND NOTICES OF BOOKS.

MEDICAL LAW FOR MEDICAL MEN, BY PERCY CLARKE, LL.B., AND CHAS. MEYMOYTH TIDY, M.B., F.C.S. Baillière, Tindall & Cox, pp. 157.

WE have no hesitation in pronouncing this book to be a most useful addition to the professional library of any practitioner of any of the many departments of the wide field of medicine and surgery. It would be very dangerous for any medical man to enter into the labyrinth of legal intricacies without professional advice, trusting to the guidance of a handbook—as dangerous, in fact, as it would be for a lawyer to treat himself and his family from the pages of Erichsen or Tanner; but at the same time it is almost essential in these litigious days that a medical man should possess some clear handbook to warn him of approaching dangers, to point out shoals and pitfalls, and to teach him when to apply to his professional adviser for assistance. It is a regrettable fact that legal cases involving members of our profession in serious loss of time and money, have been only too frequent of late—so frequent in fact, as to give rise to the formation of that excellent institution, the Medical Defence Union; and in the face of these facts, the existence of some handy and intelligible book of reference is urgently demanded.

The first five chapters deal with the relations subsisting between medical men and the medical bodies, colonial and foreign diplomas, our public and private relations, and recovery of charges. The second part expounds the law as it especially affects dentists, chemists and midwives. The third part discusses the position of unregistered men practising in any of these capacities. After this follows a series of appendices, comprising a list of the General Medical Council, a list of foreign and colonial degrees which may be added to the titles of an ordinary registration, a list of fees payable to medical men as witnesses, a table of registrable diplomas in sanitary science, forms of registration, a list of registrable foreign diplomas, and lastly, the form of a lunacy certificate.

The account of the constitution, powers, and duties of the General Medical Council is very concise and clear, and will prove interesting to many members of our Association, while the chapters about gifts, legacies, and the recovery of fees should be read by everyone. If we have a fault to find with the book, it is that so few authorities are quoted; for instance, it would have been easy to append the exact authority for the statement (p. 19, footnote 2) that it has been held that it is infamous professional conduct for a qualified medical practitioner to connive with an unqualified person in the way of giving certificates for him. Again, on page 71, footnote 1, we read:—"Where a patient promised to leave her medical attendant a legacy, who, *in consequence*, sent in no account during the patient's life-time, but received no legacy at her death, it was held he could not recover the debt from her estate." We should like to know the particulars. If the practitioner signed an agreement doing away with his title to fees, it might be so; otherwise, he would be entitled to claim a reasonable fee for six years back, whether the legacy was left or not. This note requires elucidation, but space forbids detailed criticism; we may safely say, however, that we heartily recommend the book to the careful perusal of our readers.

DENTAL SURGERY, BY HENRY SEWILL, M.R.C.S., L.D.S.Eng.  
Third Edition. Baillière, Tindall & Cox, pp. 400.

WE have just received an early copy of this book, and must defer any full notice of it until August. The work has been practically rewritten, and is illustrated with many very beautiful microphotographs; its style is lucid and its statements sound and careful. We hope to give it a full notice next month.

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## OBITUARY.

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William Wilson, M.B., C.M., L.D.S.

It is with deep regret we have to announce the death, at the early age of thirty, of William Wilson, son of Andrew Wilson, of Edinburgh, which occurred at his father's house, 2, North Charlotte Street, Edinburgh, on Thursday, the 12th ult. Although Mr. W. Wilson has been ailing for some time, the fatal termination was quite unexpected. He had the promise of a bright career before him in upholding and extending a most honourable and well-deserved family professional reputation. He was attached to the Edinburgh School as Tutor in Dental Materia Medica, and Assistant Dental Surgeon on the Hospital Staff. He was of a genial and warm-hearted disposition, and was much beloved by all who came in contact with him.

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## MICROSCOPICAL AND LABORATORY GOSSIP.

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WE have received the following queries from Mr. Caush, of Brighton, who desires at the same time to thank those gentlemen who have so kindly furnished him with replies to his former questions :—

Will Mr. Mummery kindly tell me if he uses a saturated solution of corrosive sublimate, or does he make a stronger solution by the aid of any other chemical?

Will methylated spirit do for the earlier stages of "Weil's Process?"

Will Mr. Campion kindly tell me where I can obtain aniline oil, as I have not been able to obtain it?

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WE should recommend our microscopical readers to purchase the second edition of Mr. Arthur Bolles Lee's *Microtometist's Vade Mecum*. It is a most complete and careful account of the methods of modern microscopy and thoroughly up to date. The chapters on stains are as thorough and accurate as could be wished.

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ANNOTATIONS.

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WE are requested to state that if a sufficient number of members send in their names to the Hon. Sec. of the Association before the beginning of next month, he will endeavour to make special arrangements with one of the railway companies to convey them to Exeter on specially favourable terms.

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THERE are two sides to every question, and our readers will find, when they peruse the letter which we publish this month from the hon. secretary of the Irish Branch, that he, at any rate, does not agree with the views expressed in our leader upon the resolution recently passed by the General Medical Council. We think that it is a good thing to ventilate all that can be said pro and con this and every other important matter, and for this reason we call special attention to the letter in question. At the same time we cannot quite follow our correspondent's desire to blame someone—why need anyone be blamed? There surely can exist a difference of opinion without those who differ desiring to blame each other. Secondly, Mr. Pearsall complains that the committee did not consult the Irish Branch before writing in the strain they did. Our reply is that the committee was kept in complete ignorance of the matter, and knew nothing of it until the report of the Medical Council was published, and that in that report there was no allusion whatever to the Irish Branch. Moreover, seeing that the proposition in itself has no special reference to Ireland, but applies equally to the M.R.C.S. or L.R.C.P. of England, it does not seem possible to regard the question as an Irish one. Since the article in question appeared a pretty strong expression of opinion has been evoked at the Southern Counties meeting, which, on the whole, coincided with the views expressed in these pages, so that we await with interest other comments; but we trust that the controversy, if there is to be one, will be conducted in the friendly spirit in which it has begun, and that the Irish Branch, whose interests have always received very full consideration in our pages, will not take as applicable to themselves the adverse criticisms upon a scheme the scope of which was not especially Irish, and which was not put forward as having received any sanction from the Branch.

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OWING to the number of meetings recently held by various branches of the Association, we have experienced the usual difficulties of overpressure of matter. Thanks to the courtesy of the secretaries of the Southern and Eastern Counties Branches, the difficulty has been met by the postponement of the main portion of their respective reports. We have however, felt that it would be unfair to our readers to delay the publication of the very able and original address delivered by Mr. Kirby, the President of the Eastern Counties Branch, which appears as an Original Communication on another page. His ingenious working out of the survival of the physically "unfittest" is a contribution to science of which the Association may be justly proud. Equally impossible was it to postpone Mr. Harrison's paper on Education and the valuable discussion that followed it, which also appears in the present number in advance of the report of the meeting at which it took place.

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ON another page we publish the final regulations for the International Medical Congress, and amongst the correspondence will be found a letter from Mr. Charters Birch relative to the travelling arrangements for those intending to take the Rotterdam route. As will be seen, to obtain reduced rates, and also special carriages, &c., it is necessary that the party should consist of at least thirty, and for the arrangements to be carried out ample notice must be given. We would, therefore, ask all those who intend to travel by this route to send in their names at once to Mr. Charters Birch. To those readers who do not intend to take this route, there is the Flushing one (London, Chatham and Dover Railway)—the advantage of this being a saving of nearly twelve hours. Full particulars of this will be found in "Cook's Continental Time Tables," which are both concise and complete.

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WE read in *The Lancet* that the Italian Minister of the Interior has sent a circular to all the prefects in the kingdom, pointing out that in many parts of Italy dentists do not confine themselves to the practice of their own art, but sell medicines, plasters, and ointments, which they declare to be good for all kinds of disease, and in other ways infringe on the prerogative of duly qualified medical men. His Excellency calls on the prefects to use every legal means of suppressing "not only the wrongful exercise of the healing professions generally, but more especially the pompous

display of such illegal practice in public places." The Mayors of Communes are enjoined "absolutely to forbid such practitioners from occupying public spaces."

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WE understand that the annual distribution of prizes of the Dental Hospital of London will take place on Wednesday, July 23rd, at the Stanley Exhibition. The prizes will be delivered by Mr. Thomas Underwood, who, as one of the very earliest leaders of the dental reform movement, should be a popular chairman. We hope the gathering will be numerous and enthusiastic.

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THE reports of the meeting of the Medical Council lend support to the hope that the apprentice clause will be differently administered, and that there will be little cause for complaint as to its operation in the future. Indeed we have good reason for the belief that a different view as to its scope and meaning is beginning to obtain acceptance amongst some of the more influential members of that body.

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THE STUDENTS' SOCIETY OF THE VICTORIA DENTAL HOSPITAL OF MANCHESTER.—The fifth annual meeting of the above Society was held on Thursday evening, May 22nd, Mr. David Headridge in the chair. The minutes of the previous meeting were read and confirmed. Messrs. F. L. Tanner and G. Kershaw were admitted as members. On casual communications being called for, Mr. J. C. Lingford presented a model of a lower jaw showing a supplemental canine. Mr. P. R. Sibson exhibited a well-marked case of di-laceration. The report of the Council, which was read by the Secretary, giving a short *résumé* of the work of the past session was received with much applause. The Treasurer, in his report, showed a balance to the credit of the Society of £18 9s. The Curator, Mr. D. Headridge, then read the report of the library and museum, showing an appreciable increase in both the number of books and specimens presented. The following gentlemen were elected as officers for the ensuing session :—President, G. G. Campion, Esq. ; Vice-Presidents, G. O. Whittaker, Esq., H. C. Smale, Esq., P. A. Linnell, Esq., C. H. Smale, Esq. ; Secretaries, Mr. P. R. Sibson (re-elected), Mr. J. C. Lingford ; Mr. D. Headridge (re-elected) ; Curator and Librarian Mr. J. C. Stokoe ; Councillors, Messrs. Coogan, Fisher, Sherratt Stokoe. Votes of thanks to the Chairman and Retiring Officer brought an interesting evening to a close.

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WE are requested by the secretary of the Western Counties Branch (Mr. Henry B. Mason) to state that in consequence of the Association holding its Annual Meeting in the western district this year, it has been decided that the usual meeting of this Branch shall be for business only. It will be held at the Rougemont Hotel, Exeter, on Wednesday, Aug. 20th, at 6 p.m. The Council will meet at the same place at 5.30 p.m.

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AT the annual prize distribution of the Charing Cross Hospital held on Wednesday, June 18th, the dental students again showed well to the front. A. W. W. Hoffmann obtained silver medals for practical medicine and medicine; E. B. Jones that for chemistry. In physiology (sen.) W. R. Barrett ran (proximo accessit)—Coysh doing the same in the junior section. The dental surgery prizes were won by E. May and W. Coysh—Schelling obtaining the certificate. We only hope to be able to record an equally successful result next year.

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THE Hon. Sec. desires to state that, in accordance with rule 26 of the Benevolent Fund, British Dental Association, should any subscriber to the Fund desire the revocation or alteration of any rule of the Fund, it will be necessary to give notice to the Committee of Management at least one month before the Annual Meeting.

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DR. JOHN ABERCROMBIE, Physician to Charing Cross Hospital, has been appointed Honorary Consulting Physician to the Foundling Hospital, in the place of the late Dr. Julius Pollock.

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GUY'S HOSPITAL.—The Dental School of Guy's Hospital has been recognised as a place of instruction for the Licence in Dental Surgery of the Royal College of Surgeons of England.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Mr. A. Winterbottom has resigned his appointment as member of the Board of Examiners in Dental Surgery.

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IN announcing in our last number the appointment of Mr. John Norris to the post of House Surgeon to the Liverpool Dental Hospital we regret his name was printed Morris.

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UNIVERSITY and King's Colleges have informed the Senate of the University of London that they accept the revised scheme, in the case of the former "cordially and substantially," and in the case of the latter "substantially."

## CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

### Midland Counties Branch.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The remarks of the retiring President of the above Branch at the Annual Meeting (reported in the Journal this month) will no doubt receive the serious attention of the Representative Board, upon whom—if his remarks are correctly reported—the ex-President made some extremely serious reflections. It is not my purpose, my desire, nor my duty to support the charges to which I refer, nor to defend our executive officers. Speaking as one of those not kept *au courant* through information gained in an official position with the inner workings of our institution, I wish to suggest that it would probably be a satisfaction to the great body of Members who are in the same situation as myself, if we could find in the Journal full and sufficient reports of the discussions at the Representative Board Meetings, instead of the meagre summaries which it is at present usual to provide. Of course there must often be matters under discussion which could not, without injury, be made public, but the Board could easily suppress reports of such questions when occasion might make that course desirable.

Yours faithfully,

June 17th, 1890.

AN OBSCURE MEMBER.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR MR. EDITOR,—I have read the report of the Midland Counties Branch Meeting, and must not allow some of the remarks made on that occasion to go altogether unanswered, as they appear to me to reflect in a most uncalled-for manner on our executive, in whose hands the administration of the affairs of the British Dental Association mainly lies.

The retiring President of the Midland Branch in his valedictory address says, according to the report of his speech in the Journal of 16th June, "We are, by the primary condition of our existence as a branch, contributing four times as much money to the Parent Association as we are retaining for our own purposes."

Of course the Branches must do so; the Association as a whole must be more costly to administer, independent of the cost of the Journal; for on its funds fall the costs of doing the whole work for which the Association exists. The Branches, rightly, if they have work to be done, go to the head-quarters, and the matter is discussed by the Representative Board, and, if feasible, put out of hand, and no expense falls on the Branch—for all expenses are met out of Association money.

Another remark made is to the effect that "the Parent Society considers itself entitled to overlook our work." Again I say, Of course; for as long as the Branch remains an integral portion of the Association, it must in its work fall under the guidance of the executive, which is responsible to the whole Association; and whatever a branch may choose to do at its meetings, it has no right to use the name of the Association and put forth any course of action as that of the British Dental Association, unless it has the approval of the body representative of the Association, *i.e.*, the Representative Board. If the members of the Branch desire to have a small coterie all to themselves, and to dictate to all the profession like the three tailors of Tooley Street, "we, the people of England," by all means let them, and from this small society issue manifestoes to their hearts' content; but being what they would be, without numbers or influence, their rantings would like bubbles burst by a touch and vanish into air.

No, depend on it, a body without a head is useless. We have the highest authority for saying "the head cannot say to the feet, I have no need of thee," &c.

Further on I see the same speech says :—"Measures which we think necessary for our interests in our own locality are judged from a metropolitan standpoint to be inexpedient and unwise; our representatives to the Representative Board and Committee meetings are given to understand that their personal presence is undesirable;" and further on :—"If they choose to appear personally to press some desired measure, they are met by a solid phalanx of metropolitan members, who all speak with one tongue, and they are voted down, if not silenced in any other way." Now, speaking as a provincial man, who has had some extended experience of our Representative Board, I say this is not correct. The Representative Board, consisting, as it does, of provincial as well as metropolitan members in the proportion of two of the former to one of the latter, the Provinces can outvote the Metropolis whenever they think a course of policy desirable (at the last meeting of the Representative Board the proportion present of provincial men to metropolitan was exactly as two to one, and I have always found it the same or nearly so), and as members they are sent from their respective branches by the members of the Branch they represent, and they may consequently be supposed to be the pick of their constituencies, and, as such, to be depended on to give any proposal an unbiased vote.

Such an assertion as the one above reflects not on the metropolitan members alone, but on all the representatives who do not vote as the Midland Branch dictates.

How is it that all these insinuations of an organised opposition to the will of a small section of the British Dental Association all come from one district, viz., the Midland—the branch that boasts of its age? Are we to conclude that it has got past the age of wisdom and got already into the sere and yellow leaf of old age and decadence? I hope not; but that, with reflection, it will see the error of supposing it can force its policy on a whole body, the remainder of which is not in accord with the views it chooses to put forth on its own account.

I give every credit to the Midland Branch for its activity and life in finding material for interesting meetings, and for the character of the papers read and the useful discussions provoked by the papers; in this respect the Midland is a model to the other branches.

Please excuse me for trespassing so much on your space, and believe me,

Yours faithfully,

A PROVINCIAL MEMBER OF THE REPRESENTATIVE BOARD.

*June 20th, 1890.*

### The Association and its Branches.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—My friend Mr. Quinby will not, I am sure, take it amiss if I join issue with him upon some of his utterances at the recent meeting of the Midland Branch at Derby, nor do I fear that he will mistake the brevity necessary for the compression of my comments into the space of a letter for a want of due respect for his opinions.

On page 332 of the last number of the Journal I read: "We pay our guinea to the parent Society for the privilege of having a branch, and the parent Society considers itself entitled to overlook our work." Herein I see what appears to me as a complete misconception, or rather, several misconceptions. I know of no "parent" Society; the Association is a whole, of which each member is an integral part; the members, or at least a great many of them, are grouped on geographical lines into so-called branches—an eminently convenient and desirable manner of grouping; but the individual members, and groups of members, remain parts of the whole and indeed constitute the whole, so that the term "parent" conveys a false analogy. And so long as the group, or branch, in question does not constitute a majority of the whole, it must naturally expect that its work will be reviewed by the whole—by the majority in fact.

Moreover, I cannot help thinking that a branch owes a good deal of its status and of its influence to the fact that it is a part of a body

which is not local, but which enrolls most of the active members of the profession in all parts of the country ; nay, does it not even owe a material part of its numerical strength to this same cause? Would all its members have joined it had it been a local society? But one cannot gain the advantages of intimate association with other people without surrendering some freedom in individual action.

Next I read "Measures which we think necessary for our interests in our own locality are judged from a metropolitan standpoint to be inexpedient and unwise ; our representatives to the Central Board are given to understand that their personal presence is undesirable, any matters of interest could be as well communicated in writing and would receive attention ; but if, notwithstanding this, they choose to appear personally to press some desired measure, they are met by a solid phalanx of metropolitan members, who all speak with one tongue, and they are voted down if not silenced in any other way."

Now the Representative Board consists of thirty-five provincial and seventeen metropolitan members, and I have ascertained which of them were present at the last five meetings. I find that on four occasions the provincial members outnumbered the metropolitan members, and that on the fifth they were equal in numbers, so that any measures which were "voted down" were so treated, not by a "solid phalanx of metropolitan members," but by meetings at which these latter constituted a minority. Mr. Quinby was evidently unaware of this fact, as was I too, till I had definitely ascertained it, though I suspected it before.

To pass from this little matter of fact to the more debateable ground of opinion, no sensible person would do otherwise than desire that local affairs should be dealt with by local people, but are there so very many questions in our limited sphere of dental politics which have only a local bearing? I fancy not ; but to borrow Mr. Quinby's own words "these remarks are a mere suggestion, expressing my own feeling in the matter and binding no one," and I, as a member of that metropolitan minority, am very willing to have my ideas overlooked by the majority, and to subject myself to its rulings.

I beg to subscribe myself,

Yours very truly,

CHARLES S. TOMES.

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### Mr. Macnamara's Resolution.

TO THE EDITOR OF THE JOURNAL OF THE "BRITISH DENTAL ASSOCIATION."

SIR,—Your article in the June number of the Journal appears to be opposed to the general current of feeling in Dublin and is calculated to increase the confusion between the Dental and Medical Professions, and to postpone the time when these cognate professions shall regard each

other with mutual respect. Mr. Macnamara's question was put because some doubt had been raised here whether the L.R.C.S.I. is a degree which can be registered as an additional degree under the Dentists Act. The General Medical Council have unanimously decided that this is a degree which is to be retained in that category. It is the full equivalent of the M.R.C.S.Eng., the additional degree with which most of the London men have hitherto been content, so that the author of this article, *not* Mr. Macnamara, is to be considered the innovator and disturber of the existing order of things.

The author of this article makes these objections to the retention of this degree among the additional qualifications in the Dentists Register. On examination, however, these so-called objections are in reality arguments in favour of Mr. Macnamara's policy. The leader-writer's objections are—1st. The so-called "feather in the cap" argument. 2nd. That the diploma in surgery would be given on easy terms to the dentist. 3rd. That this diploma would not be registered in the Medical Register.

1st. Startling as are some of the leader-writer's views, as expressed in this article, his remarks about the higher degrees are revolutionary, The Bachelor of Arts looks forward to become a Master of Arts, the M.R.C.S.Eng., to become a Fellow, the Bachelor of Law to become an LL.D.; so on with Divinity, Engineering, Music, &c., will be found the same laudable ambition; and yet the leader-writer coolly assumes that the L.D.S. is to harbour in his breast no similar feeling. It is quite wrong that he should wish for higher degrees in his own profession. He must, forsooth, knuckle under to the medical profession and put forward as his chief object in taking an additional degree, the desire to get on the Medical Register. Let the readers of the Journal describe whether this should be the ruling motive for taking out an additional degree, and on their decision let it rest whether his argument supports or weakens Mr. Macnamara's policy.

2nd. But, says the leader-writer, the diploma would be given on very easy terms to the dentist. If the leader-writer had taken the trouble to investigate this branch of his subject, he would not have put forward this argument. When the Irish College instituted its Dental Curriculum it arranged the curriculum, so that the dental student had to pass his earlier examination side by side with the medical student. Not only the subjects of the examination, but the examination itself and the examiners, are the same for the dental or surgical candidate.

*It is absolutely unknown to the examiner whether he is examining a dental or a surgical student.* These are the conditions under which the dental and surgical student pass together the Third Professional Examination. After this period the dental or surgical student separate, each going forward to his special final examination. Thus the Council of the Royal College of Surgeons in Ireland have arranged a system by which the licentiate and fellowship in surgery are

within the reach of their dental licentiate, but on no easier terms than they are granted to the surgical. It is a distinct wrong to the Irish Licentiate in Dentistry to take from him his *right* to go forward for these further degrees in his own College, though your leader writer seems to have no scruples in wishing to deprive him of this privilege.

3rd. But most out of tune with the present temper of the dental profession is the argument that the motive for seeking further degrees is to get on the Medical Register. Surely it is time that we should recognise that we are dentists, not doctors—time that we shall unitedly take the stand that to be on the Dentists' Register is just as high a distinction as to be on the Medical Register.

Possibly as a matter of prudence, it may be well that our additional degrees in dentistry may be such as to come within the appreciation of the medical man, armed as he is with considerable power, often unscrupulously used, of recommending patients to the dentist. If so, what can be better than a diploma in surgery of one of the Colleges? This the medical man will appreciate. But, to urge all dentists to strive to get on the Medical Register is only calculated to keep up suspicion and distrust between the medical and dental professions. If this line of reasoning be correct, the very fact that this diploma cannot be registered under the Medical Act is a strong argument in favour of Mr. Macnamara's position.

The author, when he undertook to write this article, was of course much hurried, since the date of Mr. Macnamara's motion, and that of the publication of the JOURNAL OF THE BRITISH DENTAL ASSOCIATION, were so near each other. Perhaps it would be as well in a matter of such importance if his comments had been delayed for a month. They do not seem to be the outcome of mature deliberation—in fact the crudity under the circumstances was unavoidable. It would have been reasonable to expect that the feeling of the Irish Branch should have been consulted in the matter. It might have been assumed that Mr. Macnamara understood the wishes of *that* section of the British Dental Association, but no hint was given by the Publishing Committee of any of the opposition to Mr. Macnamara which was meditated. Therefore, for any discord which may appear now between members of the Irish Branch and the Publishing Committee, the latter body is entirely responsible.

I have the honour to remain, Sir,

Your obedient Servant,

W. BOOTH-PEARSALL, F.R.C.S.,

*Hon. Sec. Irish Branch, British Dental Association.*

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### The International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—For the information of those who propose visiting Berlin for the International Congress, I may state that I have had some correspondence with Mr. Gooday, traffic manager of the Great Eastern Railway. He proposes putting on special carriages from Leeds, Manchester, or Liverpool, or other places where sufficient numbers may start from, in connection with the 4.48 p.m. train from Doncaster to Harwich on either July 31st or August 1st, as may be most convenient to members. He will also arrange with the Dutch and German Railways for through carriages from Rotterdam to Berlin; and also providing the party travelling together be not less than thirty, he will book them at pleasure party rates, which means a reduction of about £2 2s. on first-class tickets, and £1 12s. on second class.

It is necessary he should have ample notice to make these arrangements; therefore, if those members who wish to avail themselves of same will communicate with me immediately this comes into their hands, I will complete the arrangements.

It will be well for those who contemplate the journey to send for the Great Eastern Continental Time Book. It contains a great deal of most necessary information, also list of tours which may be taken in conjunction with the Berlin journey.

J. CHARTERS BIRCH.

2, Brunswick Place, Leeds.

### APPOINTMENTS.

RUPERT H. CUMINE, L.D.S.I., has been appointed Hon. Dental Surgeon to the West Ham, Stratford and South Essex Hospital.

J. F. COLYER, L.R.C.P., M.R.C.S., L.D.S., has been appointed Assistant Dental Surgeon to Charing Cross Hospital, and Tutor to the dental students.

THOMAS GREGORY, L.D.S., has been appointed Assistant Dental Surgeon to the Edinburgh Dental Hospital, *vice* Wm. Wilson, M.B., C.M., L.D.S., deceased.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.



Members are reminded that their Subscriptions to the British Dental Association became due on January 1st and are requested to forward the same to F. CANTON, Hon. Treasurer, 40, Leicester Square, London, W.C.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION

A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 8.

AUGUST 15, 1890.

VOL. XI.

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On the Twenty-first.

To all who take more than a languid interest in the progress of our profession in its slow but steady ascent from a condition of ignorance and neglect to a state of enlightened education and consideration, the proximity of our Annual General Meeting must excite a current of more or less anxious anticipation. That our patient and well-weighed efforts in a matter of such public advantage as dental education, is securing to our profession a consideration such as it has never before received, is felt and acknowledged by all who have been present at any of our meetings. We can further see that the efforts of the British Dental Association are beginning to be recognised as of public interest beyond the circle of our own profession by the increased attention which our last Annual Meeting re-

ceived from the medical journals and from the daily press in the Metropolis and throughout the country. We note, too, with satisfaction the ready and cordial reception granted to us and to our various branches by the authorities of the towns in which the Annual Meetings are held, as also the reiterated assurance of sympathy from the members of all professions, more especially of the one with which it is our ambition to be closely associated.

The programme of the Exeter Meeting has now been in the hands of our members for some time, and with one or two unimportant exceptions it will be found to correspond with the advance sheet which we were able to print in our July number. We hope that by this time a large proportion of the post cards sent out by the Reception Committee have been filled up satisfactorily and returned to the Local Secretary, and that all who can will come to the meeting, for certainly matters of great importance in the future of our profession will be brought before us. Some of the questions to be raised require more than a passing thought, and the utmost consideration and dispassionate weighing of arguments will be demanded from all who have the whole welfare of their profession at heart, and if we cannot finally decide the course of future events we can at least prepare the way for their discussion in a generous spirit and in a profitable manner.

The outcome of the efforts which have been made to gather reports from various sources as to the state of the teeth of school children will be awaited with great interest, and we sincerely hope that no one, however enthusiastic, will be discouraged by the results. However wide or however narrow they may be, they must be taken as the fruits of a movement which is yet in its experimental stage. If the methods adopted have proved successful, those who are conducting the enquiry will no doubt make use of their

experience to make them more so, and if they fall short of reasonable expectations we believe that in such case the committee appointed to carry out the work will only find reason for further exertions.

The warm interest which was evoked at the Brighton Meeting on the subject of Anæsthetics has happily been carried on to the present time and the advantages of various forms and their methods of administration are likely to be further elucidated. The promise of twenty-five microscopes and a lime-light exhibition of micro-photographs show that what may be termed the Science of Microscopy, has established a firm footing as a feature in our demonstrations.

There are, however, one or two unusual features connected with the 1890 Meeting which call for passing observation. "We never stand in the same leather twice," says an old proverb. Change follows us day by day, and the gradual changes which take place in our Association are marshalled at our Annual Meeting. The list of those who have left us for ever will, we fear, prove a heavy one. The names of those who have held official positions will be changed, and let us hope to the advantage of the Association as well as to that of those gentlemen who are relinquishing honourable but onerous posts. The three years' term of office of the President and of the Vice-President of the Representative Board closes now, as also that of Hon. Secretary to the Association. The three gentlemen who have filled these offices are not desirous of re-election, and in all likelihood a new Treasurer will also have to be chosen. Although these changes coming simultaneously will severely test the resources of the Association we feel confident in the ultimate results and we may venture to promise to the new office bearers every consideration for the difficulties of their position

from the members generally, and all the help and advice which they may require from those whose places they will fill. Another change, which in many respects may be considered satisfactory, is seen in the list of the readers of papers. Here we have a sure indication that there is a good reserve to which we can look for a supply of matter for our meetings, when we find that the names of the contributors are all new to us in that capacity.

Altogether we look forward to a meeting with many features of interest, and sincerely hope that those who attend will aid the Reception Committee and the Executive generally by readily falling in with whatever arrangements may be made for their comfort and for the dispatch of business.

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## ASSOCIATION INTELLIGENCE.

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### Meeting of the Representative Board.

THE Board met on July 26th, J. SMITH TURNER, Esq., in the chair. There were present :—Messrs. Storer Bennett, F. Canton, W. H. Coffin, D. Hepburn, Sydney Spokes, C. S. Tones, F. Weiss, C. West, E. Lloyd Williams, W. H. Woodruff and the Hon. Sec., of London ; Messrs. J. H. Redman (Brighton), G. Cunningham, R. P. Lennox, W. A. Rhodes (Cambridge), Morgan Hughes (Croydon), F. J. Vander Pant (Kingston-on-Thames), G. Brunton (Leeds), I. Renshaw (Rochdale), W. E. Harding (Shrewsbury), J. Cornelius-Wheeler (Southsea), T. E. King (York). Excuses were reported from Drs. Stack and Smith, Messrs. Browne-Mason, Clarke, Dudley, Rees Price.

Mr. RENSRAW, the Hon. Sec. of the Midland Branch, reported the steps taken since the last meeting with regard to the case of a registration by means of fraudulent documents and statements under Clause 37.

The TREASURER reported a balance of £549 12s. 7d. in the bank ; that 265 members were in arrears with their subscriptions, of whom twenty-five were in arrears for two years.

The PRESIDENT said it was not the intention of himself or the Vice-President of the Board to offer themselves for re-election at the annual Board meeting ; also, that the Hon. Sec. of the Association would resign his position after the annual meeting.

Some discussion then took place as to the successors for these offices, and various names were considered, with a view to save time at the Board meeting in August.

It was decided to recommend that the annual meeting for 1891 should be held in London, and that Mr. Smith Turner should be nominated President-elect.

On the motion of Mr. T. E. KING, it was decided that the following resolutions should be reported to the annual meeting as having received the approval of the Board :—

1. "That the following addition be made to Bye-law 8, after the words President-elect :—'The President and President-elect shall be ex-officio members of all committees, except the Publishing Committee, of the Association.'"

2. "That in Bye-law 15 the words 'and Vice-President' be inserted after the words 'President-elect.'"

The following notices of motion by Mr. PEARSALL were read, he giving notice that he would move them at the Annual Meeting in Exeter :—

1. "That the Articles of Association and Standing Orders of the British Dental Association be brought into harmony by revision or re-construction, and that some definite order of procedure be adopted at all meetings of the Representative Board and the Association for the orderly dispatch of business."

2. "That the Business Committee of the British Dental Association shall, before proceeding to elect a candidate or candidates for membership of the British Dental Association, be *required* to notify the names and addresses of such candidates to the Honorary Secretaries of Branches, the election of these candidates to be carried out at the next meeting of the Business Committee after due notice has been so given to the Branch Honorary Secretaries ; the names of candidates to be withdrawn should any Branch Honorary Secretary show cause or make reasonable objection why the election should not be carried out."

3. "That it is desirable, in the interests of the British Dental Association, that some provincial members should be added to the Publishing Committee, so as to bring the Journal into touch with the general body of members, and that at least twelve original articles on matters of professional practice and interest (exclusive of dental politics or the policy that should be advocated by the Association) be commissioned and published each year in the Journal, which articles shall be paid for on the terms that may be recommended by a Committee formed from members of the Representative Board, and that all original articles on any professional subject should be limited to six pages of the Journal."

The name of a gentleman who had promised a demonstration at the

Annual Meeting was unanimously removed from the list of demonstrators.

The final arrangements for the Annual Meeting were submitted and received the sanction of the Board.

### The Annual General Meeting.

THE Annual General Meeting of the Association will be held in the Art Gallery of the Albert Memorial Museum, Exeter, on Thursday, Friday and Saturday, August 21st, 22nd and 23rd, 1890.

The following will be the order of the proceedings :—

#### *Wednesday, August 20th.*

8.15 p.m.—The Right Worshipful the Mayor of Exeter will hold an Evening Reception to welcome the Members of the British Dental Association to the City.

#### *Thursday, August 21st.*

9.0 a.m.—Meeting of the Representative Board in the Committee Room of the Albert Memorial Museum.

10.30 a.m.—Annual Meeting of the Association for business (open to Members only) in the Art Gallery of the Museum. *At the termination of the Association business the Meeting will be open to Visitors.* Presentation of portrait of J. SMITH TURNER, Esq., to the Association, and of replica to Mr. TURNER.

Mr. S. LEE RYMER will deliver his valedictory Address.

Mr. BROWNE-MASON will take the chair and deliver an Address.

#### LIST OF PAPERS PROMISED.

"On Conservative Dentistry : its Importance as a National Institution," by J. C. OLIVER, L.D.S.Eng.

"On the Need of a Higher Qualification in Dental Surgery," by G. G. CAMPION, L.D.S.Eng.

"On the Teaching of Mechanical Dentistry to the Coming Dental Student," by S. A. COXON, L.D.S.I.

"On Some Porcelain and Gold Crowns for Bicuspid and Molars," by T. G. READ, L.D.S.Eng., D.M.D.

"On a Model with Draining Tube attached to Antrum," by H. W. MAYNE, L.D.S.I.

*Discussion.*—Crown, Bar, and Bridge Work, to be opened by J. H. GARTRELL.

1 p.m.—Adjournment for Luncheon at Rougemont Hotel. Tickets 3s. inclusive.

2.30 p.m.—Meeting resumed for reading and discussion of papers.

5 p.m.—Meeting adjourned till 10.30 a.m., August 22nd.

8.30 p.m.—Soirée at the Museum by the Reception Committee.

Concert, Vocal and Instrumental, in the Art Gallery. Selection by String Band of the Royal Marines, in East Room. Exhibition of Microscopes, Electric Apparatus, &c., to be followed by Dancing in the Art Gallery.

*Friday, August 22nd.*

9 a.m.—Annual Meeting of the Benevolent Fund Subscribers at the Museum.

10.30 a.m.—Meeting of Association resumed for reading and discussion of papers.

1 p.m.—Adjournment for Luncheon at "Rougemont Hotel."

Horticultural Exhibition on Northernhay; tickets for each member and a lady will be sent to all members from a distance who notify their intention of attending the meeting.

2.30 p.m.—Meeting resumed for reading and discussion of papers.

7.30 p.m.—Annual Dinner of the Association at the Rougemont Hotel. Tickets £1 1s.

*Saturday, August 23rd.*

10 a.m.—The meeting will be resumed at the Devon and Exeter Hospital, Southernhay, for demonstrations, for list of which see below.

1 p.m.—Luncheon at "Rougemont Hotel," after which parties of members and friends will be taken over the Cathedral, Guildhall, Ruins of Rougemont Castle and places of interest in the City.

4 p.m.—The President and Mrs. Browne-Mason will give an "At Home" with organ recital and vocal music at the Victoria Hall.

ANÆSTHETICS.

Points in Anæsthetics for Consideration, by TOM BIRD, M.A.Oxon., M.R.C.S.Eng.

Nitrous Oxide, with special arrangements to avoid noise, &c., adapted for nervous persons and children; Nitrous Oxide and Ether; Ether; Chloroform for prolonged Operations about the Mouth, by DUDLEY BUXTON, M.D., B.S.Lond., &c., &c.

It is proposed to explain Apparatus, and indicate in what cases special methods are advisable, with a view to assist in arriving at a choice of Anæsthetics in any given case.

Oxygen and Nitrous Oxide, with his special apparatus for administering this Mixture, by F. W. HEWITT, M.A., M.D.Cantab., &c.

LIST OF DEMONSTRATIONS PROMISED.

"Pivoting," by F. H. BALKWILL, L.D.S.Eng.

"Tooth Crowning," by F. H. BRIGGS, L.D.S.Edin.

"Mr. William Broughton's Electric Lamp for Operating in the Mouth," by G. G. CAMPION, L.D.S.Eng.

"A Method of adding Gum to ordinary Teeth, rendering it more generally available," by G. CUNNINGHAM, M.A.Cantab., L.D.S.Eng., D.M.D.Harvard.

"Removable Bridge Work"; "New Vulcanizer and Gas Regulator"; "New Cord Dental Engine," by J. H. GARTRELL.

"The Fitting of Seamless Collars by the Mandril System, in connection with Gold Crowns and Bridge Work," by T. COOKE PARSON, M.R.C.S.Eng., L.D.S.I.

"A Perfected Pneumatic Mallet," by R. P. LENNOX.

"Preparing Interstitial Cavities in Teeth for Gold Filling, with Hallam's Separators," by J. WALKER, M.D., M.R.C.S., L.D.S.Eng.

"Immediate Treatment of Suppurating Tooth and Root Filling," by W. H. WOODRUFF, L.D.S.Eng.

Any Communications or questions relating to the Demonstrations to be addressed to J. M. ACKLAND, 24, Southernhay, Exeter.

#### MICROSCOPICAL DEPARTMENT.

In the room devoted to this section on the first floor of the Museum, Hon. Secretary, W. A. Hunt, there will be twenty-five instruments with low and high powers, under the charge of C. L. Curties, from Baker's, High Holborn; and other instruments with high powers, brought and exhibited by members themselves.

During Thursday, August 21st, and Friday, August 22nd, very numerous and interesting microscopical slides will be shown.

Messrs. Underwood, Parson, Campion, Balkwill, Andrew, Hunt and others will assist in exhibiting.

#### *List of Microscopic Slides.*

Lent by T. C. WHITE, London :—

1. Ovarian tooth (canine).
2. Ovarian tooth (molar).
3. Course of nerve fibres and odontoblasts.
4. Teeth of blow fly.
5. Dental exostosis.
6. Lining membrane of pulp cavity.
7. Dental pulp.
8. Taste goblet cells (rabbit).
9. Secondary dentine.
10. Section of pulp (canine) horizontal.
11. Section of pulp (canine) vertical.
12. Horizontal section through dentine and pulp.
13. Carious tooth, vertical section.



14. Hand of human embryo (2 months).
15. Odontoblasts on dental pulp.
16. Dentinal fibrillæ.
17. Dentinal tubuli, transverse.
18. Tooth bud on molar.
19. Pulp of bicuspid.
20. Enamel fibres, transverse situation.
21. Molar from a barrow, vertical section.
22. Odontoblasts on dental pulp.
23. Section of jaw of kitten.
24. Course of nerves in pulp.
25. A photo-micrograph to illustrate slide 8.

Lent by H. SEWILL, London :—

Eight slides showing bacteria and all the organisms found associated with caries. Slide (22) contains all nearly on one slide.

Lent by C. WEST, London :—

1. Tooth of roach, vertical.
2. Tooth of shark, fossil, transverse.
3. Tooth of shark, fossil, vertical.
4. Milyobalis' tooth, transverse.
5. Tooth of hake, vertical, showing hinge.
6. Jaw of haddock, vertical.
7. Jaw of kitten, vertical.
8. Section of ivory (diseased).
9. Section of human tongue.
10. Section of papilloma, human palate.
11. Section from frontal bone, human.
12. Nerve from human tooth.

Lent by D. E. CAUSH, Brighton :—

Twenty-four slides showing irregular development of cementum, union of roots by cementum, irregular pulp canals from deposit of cementum, transverse canals in cementum, enlarged canals partially filled with cementum, and many interesting and instructive specimens of exostosis.

Lent by G. G. CAMPION, Manchester :—

Six slides illustrative of caries.

Lent by F. W. BALKWILL, Plymouth :—

- One slide, with 200 different specimens of foramenifera.
- One slide, with 50 different specimens of foramenifera.
- One slide, with 12 different specimens of foramenifera.
- One dozen slides with a species each of foramenifera.

Lent by A. C. ROPER :—Fifty slides.

Lent by T. D. HARRIS :—

Thirty slides ; and many others by various contributors.

On Thursday, August 21st, in the Library during the *soirée*, W. A. Hunt will exhibit photo-micrographs, &c., of general interest, with lantern and limelight by G. G. Campion.

On Friday afternoon, August 22nd, at 3 p.m., in the Exhibit room, Mr. A. S. Underwood will show with the limelight, and explain the very interesting series of photo-micrographs shown before the Odontological Society in April last, with some additional slides of his own. Lanternist, W. A. Hunt.

Communications in relation to this department should be made to W. A. Hunt, Yeovil.

#### SPECIAL NOTICES.

No special arrangements have been made about tickets to Exeter. The train leaving Paddington at 3 o'clock on Wednesday 20th, is a very good one, arriving at Exeter, at 7.14 p.m., in good time for the reception by the mayor, the time for which has been changed from 9 o'clock to 8.15 p.m.

All Members attending the Meeting are requested to sign their names in the book provided for that purpose, at the entrance to the Museum. Subscribers to the Benevolent Fund and others are requested to attend the Annual Meeting of the Benevolent Fund.

The Devon and Exeter Institution, the Northernhay Club, the Exeter and County Club, Musgrave House, will grant Members of the Association during the Meeting the privilege of Membership on production of their Cards.

Members will find at the Albert Memorial Museum adjoining the Art Gallery a reading and writing room, with facilities for posting letters and sending telegrams. The room will be supplied with writing materials and daily papers. The room for the Representative Board, general enquiry and Secretary's office, will be on the ground floor of the Museum.

MORTON SMALE, *Hon. Sec.*

The chief hotels in Exeter are the "Rougemont Hotel," which will be the headquarters of the Association, and which will provide a smoking-room reserved for Members of the British Dental Association only—charge for bed, breakfast and attendance 7s. 6d. per diem; the "Royal Clarence Hotel," Cathedral Yard, bed, breakfast, and attendance, 7s. 6d. per diem—this house is situated opposite the Cathedral, in the Close, and in immediate proximity to the Albert Memorial Museum; "The London Inn," the old coaching house of the City, at the top of the High Street—charge for bed, breakfast, and attendance, 7s. 6d. per diem. The tariff of the above houses will be sent on application to the proprietors. Other hotels are the "Half Moon," in the High Street—charge, bed, breakfast and attendance, 6s. 6d. a day; the "Globe," in the Cathedral Yard, and the "Queen's Hotel"—bed, breakfast, and attendance, 5s. 6d. per diem. As August is a busy period on account of its being the height of the touring season, early application for accommodation is desirable. Visitors to the City will find many delightful excursions for the day to the sea-side at Exmouth, Dawlish and Teignmouth; to each of these

places daily excursion tickets are issued by the Great Western Railway and London and South Western Railway. Also by the London and South Western Railway to Dartmoor, from the Okehampton, Bridestowe and Lidford Railway, and at the latter station by an easy walk, Lidford Gorge and Waterfall are to be reached and Exeter regained the same day. Amongst the day excursions, too, are circular tickets by rail and steamboat to Totnes, down the River Dart to Dartmouth, and train to Torquay, returning the same day to Exeter.

Longer trips can be made by rail and coach to Dulverton, over Exmoor to Dunster and Porlock, thence to Lynton and Lynmouth and on to Ilfracombe or Barnstaple, returning to Exeter by train; this would require two days.

The scenery on the borders of Dartmoor is remarkably fine, and can be reached, the visitor will find, by train at other points besides those above mentioned; whilst all round the coasts of Devon and Cornwall are numbers of towns and watering places that would be found attractive places for any Members who would like to extend their holidays.

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### Southern Counties Branch.

THE Annual General Meeting of the above Branch was held at Kingston-on-Thames, on Saturday, June 21st.

Members present:—Messrs. W. B. Bacon, F. J. Van der Pant, Morgan Hughes, J. E. Welch, W. M. Clarke, J. Henry Whatford, J. Dennant, James F. Rymer, J. T. Whatford, E. T. Cooksey, G. Henry, G. Pedley, J. H. Reinhardt, H. Beadnell-Gill, Walter Harrison, G. Olive Richards, F. W. Ellwood, T. A. Tait, D. E. Caush, W. T. Trollope, John Ellis, Walter Saunders, Leslie Maxwell, Stephen Hoole, J. J. Bailey, F. Petty, Lawrence Read, W. E. James, H. O. Colyer, S. Lee Rymer, B. Williams, and F. H. M. Van der Pant.

The visitors present included J. Smith Turner, F. Newland Pedley, G. Cunningham, Horace Van der Pant, Geoffrey Hughes, C. Williams, H. Helyar, F. Walker, and others.

As on previous occasions, the Branch was fortunate in the weather for the excursion, and the large party who accepted Mr. Van der Pant's generous hospitality on the steam-launch *Princess Beatrice*, seemed to thoroughly enjoy themselves. The boat started from Kingston railway bridge, after a photograph of the group had been taken, and going up the river as far as Walton, returned to Surbiton in good time for the general meeting at 4 o'clock.

The Council Meeting was held on board, when Mr. Charles E. Peckover, L.D.S.Eng., was elected a member of the Association and Branch, and Mr. S. Longhurst of the Branch.

On the return journey the members disembarked at Surbiton, and made their way to the Assembly Rooms, where the Annual General Meeting was held at 4 o'clock. Mr. W. B. Bacon, the retiring president, occupied the chair, and was supported by about forty

members. The minutes of the last meeting, having been published in the JOURNAL, were taken as read.

Mr. BACON, who was cordially greeted, in a few valedictory words said his year of office was now at its close. It seemed almost incredible that so short a time as a year ago he took upon himself the responsibility of becoming president of the Southern Counties Branch of the British Dental Association. It had been a very pleasant and easy term for him, and he had endeavoured to discharge his duty to the best of his ability, and he hoped he had been successful in meriting their approbation. He now had much pleasure in putting Mr. Van der Pant in the chair, and hoped that gentleman would have a very successful year of office.

Mr. Van der Pant then took the chair amid hearty applause.

Alderman RYMER, J.P., said it was his pleasing duty to propose a cordial vote of thanks to Mr. Bacon for the ability with which he had conducted the proceedings connected with his important office, and for his liberality and his urbanity on all occasions. Their association with him during the past twelve months in his capacity as president had been of a most enjoyable and useful kind.

Mr. J. DENNANT seconded the motion, which was carried with acclamation.

Mr. BACON, in acknowledging the compliment, thanked the members most sincerely for their kind vote, and said it had given him very great pleasure to serve them, and he should always endeavour to be of as much use as he could to the British Dental Association.

#### THE INAUGURAL ADDRESS.

The PRESIDENT, who was loudly cheered, then proceeded to deliver the following inaugural address :—

GENTLEMEN,—It is with a sense of deep satisfaction, tinged somewhat with diffidence, that I find myself occupying this post of honour—President of the Southern Counties Branch of the British Dental Association. I most heartily welcome you to this ancient town, which, although shorn of much of its former splendour, is still worthy of some notice and consideration. It is not only the capital of Mid-Surrey, and head of this Parliamentary division, but is also a garrison town, and has just recently been selected, out of many rivals, as the future habitation of the Surrey County Council.

It possesses many charters, rights, and privileges, granted by King John and his successors, in return for “hard cash” handed over to those needy monarchs. As a market town it is second to none in the county, no other town within a radius of ten miles being allowed to hold a cattle market.

It also contains a fine church of great antiquity, in which many of the Saxon kings were crowned—the coronation stone is still to be seen in the Market Place. Also many curious and ancient buildings, many

of which, alas ! are giving place to the utilitarian spirit of the age, from which disease our authorities are at present suffering in a marked degree. But they cannot, or at least will not, rob us of such a monument as Hampton Court ; neither will they turn our "Silvery Thames," on which you have sailed, or rather "glided," with pleasure and satisfaction, I trust, to-day, into a sewer full of mud, as our neighbours below Teddington have such woeful experience of, and who are so patiently awaiting the construction of the long talked-of Lock at Brentford or Isleworth. All honour, indeed, is due to the "powers that be" that our river is "a thing of beauty," and "a joy for ever," let us hope.

I trust, gentlemen, that what you have seen to-day may have interested you much, and those of you to whom this place is an unexplored region may be tempted to repeat their visit, and that they may become better acquainted with a district which, although almost within sound of the great City, contains so much beauty of scenery of a truly English and pastoral character.

Gentlemen, I trust the confidence you have reposed in me in electing me to fill this honourable position may be fully retained during my year of office, and speaking again of the present, that this may prove in every way a red-letter day in the annals of the Branch. In the recollection, however, of such meetings as at Tunbridge Wells, Southsea and Croydon, with such men as guided them, I may well feel doubtful of my own powers, but remembering the warm-hearted generosity and kindly feelings existing in the Southern Counties Branch, I will not despair of toleration and support.

We live in an age in which every one must work and think to the utmost if he expects a hearing, and brace himself up as if it were for the fray, and we must convince our patients of our capacity, and of affording them—not all so glibly promised by "Dental Institutes, Limited," and other like delusions to which poor governesses are invited—but a substantial equivalent for the fee which we are not ashamed to ask, in the shape of good work which will bear scrutiny, and skill of the highest order, brought up to date by means of exhaustive inquiry, and in attending meetings such as our Association annually holds, where, by the aid of clinics and through the exchange of ideas on every dental subject, our art is brought to such a pitch of perfection as must be acknowledged by all.

Scarcely a day passes by without something startling presenting itself, whether it be hypnotism, "rapid inspirations," or other equally sensational or perplexing phenomenon ; and we are assailed by all sorts of questions, and expected to give clear and intelligent reasons for or against every craze that comes to the surface, at the risk of being written down an "ass," and perhaps told that "Dr." Glibbard Escarot's opinion, as expressed in a beautiful gilt-edged brochure, fit for the drawing room, is so very clear and lucid on that subject ; and if you attempt to show up the "Dr." in his true colours, "what a pity

that professional jealousy is still so intense" is the scarcely concealed rejoinder.

No! we must preforce educate up to the highest pitch of excellence, and even levelling down occasionally to quack literature in order to prove its truculency and worthlessness.

We now possess doubtless many advantages unknown to the last generations of dentists, who were for the most part content to plod on selfishly without an idea beyond benefiting themselves, nor a wish or thought to elevate a profession, which indeed only existed in their own egotism. "The dentist" *par excellence*, "a peculiar system known only to himself," &c., &c.

But we must not lose sight of the fact that with all our enlightenment and liberality, our responsibilities have relatively increased, and with it also the wear and tear of this intensely busy age. So great indeed has this become, that we find some of our most earnest workers, and to whom the dental profession owes so much, one by one disappearing from our midst, and often while still in the prime of life but prematurely aged by the greatness of their efforts. All honour to them! Let us ever remember the pioneers of the great movement which has raised us into the stature and fulness of our present recognised and assured position. When we think of such names as Tomes, Saunders, Turner, and many others, our hearts swell within us, and we feel proud indeed to claim them as brethren—men who were not ashamed to fight side by side with us, and who spared neither time nor means until the victory was won, and this Association the outcome of their labours. A fitting and I hope enduring monument to their merits. May it long continue to adorn our profession, and lend its aid in solidifying what has been so ably begun. But if the Association is to become the power and strength we must all desire for it, this result can only be accomplished by the loyal support of the whole profession. It is clearly to the advantage of every member of the profession to join our ranks, for with the accession of numbers its usefulness would be increased, and it would be enabled to defend the public much more effectually from the ignorance and dishonesty of the unregistered adventurer, as well as preventing any names but those of the duly qualified from appearing on the Dentists' Register, or where such names have so appeared, to effect their removal from the same. The Association, indeed, has not been idle, and has already successfully proceeded in the cases of some glaring offenders. With increased support it will soon put down altogether this crying evil. I would therefore recommend everyone, as soon as he is himself registered, to take another step forward and join this Association. Taking it on low grounds, he will scarcely find a better investment for his guinea, for he not only receives the admirable Journal of this Association every month, but he has numberless opportunities of instruction and enjoyment, and through the inter-

change of ideas, his mind is enlarged, many valued friendships are formed, and at the same time he has the satisfaction of believing that he is lending his aid to a great and noble work, which must in the end prove a lasting benefit, not only to himself and his profession, but to the whole community. I can only hope that the result of this meeting to-day will be a large addition to our numbers.

Gentlemen, the papers I am about to introduce to your notice will, I trust, meet with your approval, and that each may be as fully discussed as time permits, and that after the burden and heat of the day we may have what is dear to every Englishman, a good dinner together and a very pleasant evening, and when the hour of parting comes you may each carry away with you a pleasant recollection of your visit to Kingston, and kindly feelings for your President. I will conclude by expressing the hope that we may meet again in "fresh fields and pastures new" for many years to come.

Mr. J. WELCH moved a hearty vote of thanks to the president for his address. He thought they must all be convinced that they had put the right man in the right place. Mr. Van der Pant had commenced his year of office in a very energetic manner, and he was sure that when it had terminated, none of the members would regret having placed him in the position.

Mr. BACON seconded the motion, which was carried with great heartiness and was briefly acknowledged by Mr. Van der Pant.

#### THE ANNUAL REPORT.

Mr. MORGAN HUGHES, the honorary secretary, read the following report of the Council for the past year :—

Your Council are pleased to be again able to report an increase in the number of our members. There are now eighty-one names on our list as against seventy-four last year. Unfortunately we have to lament the loss, by death, of Mr. C. H. Bromley, of Southampton, who, besides being an original member of your Council and a Representative on the Representative Board, was just prior to his death nominated by the Council for the office of President Elect. A resolution expressing our sincere condolence with his widow and family in their sad loss, was passed by the Council and forwarded to Mrs. Bromley.

It is very desirable that members should use their influence with any of their professional neighbours who still hold themselves aloof from the benefits of association with the great bulk of reputable dentists, to induce them to join a body which has already done so much to cultivate a generous professional spirit among men working in the same corner of the great field of medicine.

The great feature of the past year has, of course, been the Annual Meeting of the Parent Association at Brighton, and we think the

Branch may congratulate itself upon the success of its efforts to make suitable arrangements for the reception of the Association. The large amount raised in subscriptions towards the Guarantee Fund was a practical proof of the interest felt by our Members in the Association, and their desire to return the hospitality they have received from other Branches on similar occasions ; while the success of the Meeting was assured by the hard work of the Executive Committee and its energetic Hon. Secretary, Mr. J. H. Redman.

Your Council regret that it was found necessary to abandon the usual Autumnal Branch Meeting owing to the difficulty of obtaining papers for the occasion, but hope that such an exceptional dearth of material may not again occur. With this belief, and subject to the approval of the Meeting, the Council have definitely arranged for meetings at fixed dates and places during the ensuing year, as follows : On October 11th, at Brighton ; on Feb. 14th, 1891, at Brighton ; on April 11th, 1891, at Ryde, and the Annual Meeting at Hastings, on June 20th, 1891.

Last year our Annual Meeting at Tunbridge Wells, under the genial Presidency of Mr. W. B. Bacon, cannot fail to awaken pleasant reminiscences in our minds of the coach drive to Penshurst, made more enjoyable by the glorious summer weather we were favoured with, the refreshing lunch, and the interesting old rooms at Penshurst Place. Unfortunately the excursionists forgot how the enemy Time was passing, and our General Meeting having consequently started very late, the business had to be unduly hurried.

Your Council feel that as time on these occasions is so limited, it is best—unless Members are willing to devote another day to the Meeting—to confine the programme strictly, at our Annual Meeting, to Branch business and the discussion of professional politics, leaving the more scientific part of our proceedings to the other three meetings of the year. This will allow the popular picnic element to remain uncurtailed, and we cannot, in our opinion, afford to lose such a valuable means of drawing Members closer together in the bonds of personal friendship.

The Meeting itself was stamped by a most able paper by Mr. WALTER HARRISON, on Dental Education, and some valuable speeches by the DEAN of the London Dental Hospital and others. The subject was so important that its discussion was adjourned, and we hope to-day to again hear Mr. Harrison give his views as affected by the recent changes in the dental curriculum. At the March Meeting at Brighton, we had a paper on "Gold Crowns," by Mr. Van der Pant, which led to a good discussion, and a "Plea for Clinics," by Mr. J. J. Bailey, of Guildford, which succeeded so well in its object that your Council have decided to make practical demonstrations a feature in our October Meeting at Brighton. This decision was largely influenced by the result of the canvass of Members for their



opinion by the circular issued by the Hon. Secretary. Your Council do not, however, at present see their way to hold these demonstrations at all our Meetings.

Your Council recommend the holding of next year's Annual Meeting at Hastings, with Mr. G. Henry as President. They also nominate Mr. W. B. Bacon as Vice-President, Mr. J. H. Redman as Hon. Treasurer, and Mr. Morgan Hughes as Hon. Secretary. Three Members of the Council retire in rotation this year, viz., Messrs. G. Henry, J. Henry Whatford, and J. E. Welch. Of these Mr. Welch is the only one seeking re-election.

Your Council regret that owing to the absence from illness of the Hon. Treasurer, they are unable to present a proper balance sheet for the year to-day. They propose to submit it at the October Meeting, which will be made special for that purpose.

A brief statement of accounts, read by the SECRETARY, showed that after meeting all liabilities up to date there remained a balance in hand of £4 14s. 6d.

The report was, on the motion of Mr. HUGHES, seconded by Mr. JAMES RYMER, received and adopted.

#### ELECTION OF OFFICERS.

On the motion of the PRESIDENT, seconded by Alderman RYMER Mr. Henry was unanimously appointed President-Elect.

Mr. HENRY, in acknowledging the vote, heartily thanked the members for the way in which they had endorsed the nomination of the Council. He could assure them that words failed him to express the deep sense he had of the honour they had conferred upon him. Whatever his misgivings or sense of personal insufficiency, he was quite sure, from his knowledge of the gentlemen who formed the Council, that he should have their sympathy and support, and that, of course, was a great consideration for him. He regretted the sad circumstance which had led to his nomination; and he also wished to express his sense that he was preceding a gentleman whose personal gifts and natural ability, and whose services had been so freely given for so many years in the cause of dental reform, as well as to their local branch. He hesitated to take precedence of such a gentleman, but he had expressed his wish to have the honour more widely distributed, so that the Association should have a greater influence for the good of the profession. He (Mr. Henry) was really a veteran in the profession, because he enjoyed a few years in his father's surgery before dental reform was initiated by Alderman Rymer. He attended the earliest meetings which were called, and although too young to take a prominent part in it then, when the College of Dentists came forward he joined it and went through a course of lectures under the encouragement of Mr. Rymer, with practical success. He felt that such an honour as they were conferring upon him should be worn like

a delicate rose. He recollected the men who had preceded him in the chair, and he hoped that when he was launched into active service he should not disappoint their expectations. He felt that the science of dentistry now had arrived at such stability, that it was really only defiled by the different kinds of misleading advertisements which they saw about. It was a fortunate thing for Hastings that they were to have there next year the good influence of the British Dental Association, so that the uninformed public might be initiated with regard to the true state of affairs as to these advertising men, and that the reputable practitioners should not suffer from their actions.

On the motion of Mr. REINHARDT, seconded by Mr. CLARKE, Mr. Bacon was elected vice-president; and Mr. J. H. Redman and Mr. Morgan Hughes were re-elected treasurer and hon. secretary respectively. The thanks of the Association were also tendered to the two last-named gentlemen for their valuable services.

Mr. HUGHES, in response, said the officers tried to do their best. It was very difficult to please everybody, but if they did not succeed in doing so they at least tried.

The three retiring members of the Council were Messrs. Henry, Whatford and Welch, the latter being the only one who sought re-election. Six gentlemen were nominated for the three seats, the result being that Messrs. Welch, Petty, and James Rymer were elected.

#### CASUAL COMMUNICATIONS.

Mr. JAMES RYMER presented the following communications:—

##### *Case of Erosion.*

GENTLEMEN,—I shall only detain you a few moments in bringing this case before this meeting. Mrs. P., æt. about forty, came to me to have her front teeth removed. By the model you observe the disadvantage for a rather handsome woman to have teeth so defective. At the same time, she suffered continual wearying pain. Under these circumstances I removed all the six teeth, two of which I pass round.

You will observe that there is no caries, and it is simply erosion. It differs from the usual cases as to site, for you all know that the cervical margin is the normal seat for this affection. As to cause there was none. Patient is healthy, takes no medicine or acid, and she has never brushed away at her teeth abnormally. Her mouth and lips are clean, and she has no "acidity," to use the popular term.

CASE II.—Hypnotism of boy, æt. fourteen. Wished two roots removed; gave gas; got one out; boy nervous, so did not wish to give any more. So put facepiece to mouth after five minutes' interval from first operation; told him to breathe; gave no gas, only air; went to sleep; hardly felt pain.

Mr. G. HENRY read the following paper:—

*Dilaceration, with Subsequent Shedding of a Bicuspid Crown.*

When the patient, a young gentleman in his eleventh year, was brought to me a month ago, I found the first inferior left bicuspid extremely loose, and a probe could be easily passed immediately through at the neck of the tooth from its lingual to its buccal surface. Before removing the rootless crown and placing it in its corresponding niche, I took a model, and you now see it as the case was presented to me.

We appear to have in this specimen a case of pure *dilaceration*, which occurred during the formative period a year and nine months previously, and its history shows it to have been due to a dangerous fall over a banister some fifteen or sixteen feet into the hall below, when certain teeth were forced through the lip, which had to be sewn up, and several others on the left side of the face on which he fell were badly dislocated.

On removing the tooth from the cast it will be found to be cupped out and to resemble a deciduous tooth, shed after the usual absorption of its root; but such an absorbed surface would present rounded festooned depressions passing abruptly across the pulp cavity, whilst that of our specimen is distinctly smooth, conical, and laminated, as left when dilaceration severed the partially developed tooth from its formative pulp.

It must have been a severe accident which could so forcibly displace the cap of developed dentine of a bicuspid tooth, which from its sheltered position in the maxilla makes our case remarkable; for it is clear that incisors and canines are more liable to be the subjects of dilaceration, since they are more exposed to accidental influences.

On carefully examining the vascular parts beneath, no trace of its roots was discoverable, and the interesting question arises, whether a separate root development may one day present itself? A recent examination of the gum showed this to be perfectly normal and rounded in appearance.

The present case differs materially with one I had the pleasure of exhibiting at our Hastings meeting in September, 1888, with which no accident could be associated, and in which the specimen was a superior bicuspid crown prematurely erupted in the eighth year, an uncalcified root being removed and preserved at the same time.

Some ingenious contrivances were exhibited by Mr. Pedley, sen., and the meeting closed with a vote of thanks to Mr. Harrison, and to the gentlemen who had introduced casual communications.

### THE DINNER.

The Annual Dinner was held in the evening, and proved an exceedingly enjoyable function. The PRESIDENT occupied the chair, and was

well supported by members of the Association, and by the Mayor of Kingston (James East, Esq.), the Vicar (Rev. A. S. W. Young), T. Guilford, Esq. (Chairman of the Surbiton Improvement Committee) Dr. Strong (Croydon), Dr. Owen Coleman (Surbiton), Dr. Kane (Norbiton), Dr. Capes (Kingston), Mr. W. Drewett, Mr. R. Sebastian Hart, &c.

The loyal toasts having been duly honoured,

Dr. KANE proposed the toast of the evening, "The British Dental Association, and the Southern Counties Branch." He said it was a peculiar pleasure to him—as belonging to a sister profession—to propose this toast. The dental profession, like his own, had for its chief object the alleviation of human suffering. The British Dental Association was, he believed, yet in its infancy, and it assuredly had a great career before it, for its 800 members embraced some of the foremost men in the world in dental surgery. There was no necessity to multiply words in proposing such a toast, with which he would couple the names of Mr. Smith Turner, as representing the parent Association, and Mr. Vanderpant, the esteemed President of the Southern Counties Branch.

The toast was cordially drunk.

Mr. SMITH TURNER was loudly cheered on rising to respond. He said it was a great pleasure to him to be present. For the information of the visitors, he should like to say that the British Dental Association was formed after the Dental Reform Committee had succeeded in getting through Parliament the Dentists Act, which gave dentists a distinct professional position, and the right to use the title of dentist, and established a dental register, upon which all properly qualified dentists, and all who had been in practice before the passing of the Act, had to be registered. A dentist's education was not finished however many diplomas he might have, and however hard he might have studied, until he was placed upon the register; and no one had a right to call himself a dentist who was not upon the register, and had no right to practise dentistry unless he was qualified as a dentist or as a fully qualified medical man. The dental curriculum was a very full one, and was being yearly made still more extensive. It claimed from the dental student the same preliminary examination as was required from the student in medicine. That at once placed the dental student on the same platform with regard to general education as those gentlemen who studied more fully the whole science of medicine and surgery. The dental student had to go through, as nearly as possible, the same course of instruction as the medical student during the first part of his career. But for the purpose of enabling the dental student to serve the public properly as a dentist, it was considered advisable to break off his medical and surgical studies at a certain point short of the full curriculum required for the full medical diploma. At this part of his studies the dental student was drafted away to a dental hospital, where

he filled in a considerable portion of his time, during which time he had to carry on a certain amount of study in dental physiology and anatomy to qualify him for the pursuit of his profession. The necessity of this was evident, because there was no teaching of the kind in the medical curriculum, and he had to strike out into a different path altogether. But although he spent the same amount of time as a medical practitioner in qualifying for his profession, he did not take the same diploma, because he branched off in the middle of his medical and surgical studies to pursue a special branch. That was the difference between the present medical practitioner and the present dental practitioner. The difference was not in quality or degree, but the dentist had to find for himself a species of education which was not provided for him in the medical and surgical curriculum. It was sometimes considered that a dentist's education was only partial. That might be true, so far as making him a surgeon or a physician was concerned, but it was most perfect so far as making him a dentist was concerned, and that was the position in which he was pleased to serve the public. If he could be educated to serve the public in an efficient manner in the sphere in which he pretended to serve them, then his education was such as it ought to be. The British Dental Association was established shortly after the Act was passed, in order to maintain the spirit of the Act, and in order as far as possible to unite dentists and to promote good fellowship amongst them and social intercourse and scientific knowledge. It was essentially a provincial Association, and its annual general meetings were held four times out of five in the provinces. It had a number of branches, and the Southern Counties Branch was not the most insignificant of them. The Association was composed of members residing in all parts of the United Kingdom, on the Continent of Europe, and in the Colonies. The Branches were useful, but he would have them understand that in principle the Association could exist without the Branches, which were not necessarily part of it, as the Association existed before any Branch was known, and made provision for the formation of the Branches. The chairmen and secretaries of the Branches were members of the Representative Board, and each Branch had the power to nominate for election members of the Board, which was the executive of the Association. He believed the Association was on the right tack. The Medical Council, in administering their affairs, perhaps had not that knowledge of dental requirements and the feeling of the dental profession which it would be well that it should have. It was a pity, he thought, when members of the Association who were impatient at the action or inaction of the Representative Board went behind the Board, and got members of the Medical Council to take up certain points in reference to dentistry or dental politics, which neither they, apparently, nor the members of the Medical Council knew very much about. Their own curriculum was

ample for their professional requirements. People might take additional qualifications if they liked—all honour to them for doing so; but that they were higher in reference to dentistry he was not prepared to admit. That freak of the Medical Council, which had been rejected by the profession, was intended to give them an additional qualification which was not registrable on the medical register; in fact, to give them a diploma which was a diploma only in name. He was happy to find that the profession had received it in the right spirit, and were prepared not to take advantage of that very liberal offer.

Mr. VAN DER PANT also responded on behalf of the Southern Counties Branch. He supposed they were some part of the British Dental Association, and they hoped the Association required their services. At the time of its birth the Association had no branches. At the time of their birth they had legs and arms, but they were not of much use to them. The British Dental Association at its inception was somewhat weak, but it had grown vigorously, and he hoped it would ramificate until nothing in the shape of impure dentistry would exist throughout the land. He had no doubt the time would arrive when they would spread such a light in the land that nothing evil, in the state of dental surgery, could possibly exist.

Alderman RYMER, J.P., proposed "The Medical Profession." He did not suppose any toast was more cordially received—whether by the great Meetings of the Association, held annually, or by the smaller Meetings of the Branches—than that of the medical profession. He had heard it proposed on many occasions, and he was quite sure the enthusiasm with which it had been received showed that it was always drunk with sincerity. As the President for the year of the British Dental Association he felt proud to propose the toast. They had heard that dentists claimed equality with any other profession; that the test was equal to that of the medical profession for their peculiar calling, and therefore they regarded themselves as equals with the medical profession, so far as their speciality was concerned, and he was quite sure that the sister profession of medicine looked upon them in the same light. Thirty-five years ago it was very different. But few men of that day could really be called capable of occupying a professional position at all. There was no organisation, no system of education, and no examination. All that had now been changed. When the first efforts were made, thirty-five years ago, to secure an organisation for the profession, amongst all those who assisted in the great cause of dental reform, none assisted them more ably and more cheerfully than the medical profession. Therefore, if for no other reason, they received most cordially this toast. He associated with the toast the names of the four medical men present.

The toast was very cordially drunk.

Dr. CAPES, in reply, expressed the pleasure it afforded him to be present. He thought there was a grand future before the dental

profession. If they could look into some of the dental museums about 2,000 years hence, they would find there as curiosities some of the cards which were now to be seen occasionally in the windows of toy shops, "Teeth extracted without pain." Such a thing as that in 2,000 years time would not be known. The dental profession had risen and was still rising, and was going to rise. There was no doubt that, at the present time, it was hampered very much by men who called themselves surgeon dentists, doctors of dental surgery, &c., but they would be extinguished in time. If only the dental profession would band themselves together, and try and crush out all the badness that existed—and he must say there was a great deal of it—they could put it down. If there was one fact more certain than another, it was that the dental profession could no more exist without the medical profession, than the medical profession could exist without the dental profession. They must work hand in hand. When the dentist required the responsibility to be thrown upon someone else the first person he went to was the doctor. And there was no doubt that when a patient went to the doctor with the toothache, and it was an awkward case, he said, "You had better go to a dentist." The two professions were inter-dependent.

Dr. STRONG also responded, and said he was unfortunately one of those who could go back a great many years, even to the time anterior to the British Dental Association or the College of Dentists. When he first entered the medical profession, which was now rather more than forty years ago, a professional dentist was hardly known. He remembered a gentleman who was associated with him as a student at St. George's Hospital, Mr. Parkinson, a name very much honoured in the profession, and when he took up his degrees they looked upon him as an awful prodigy. But no doubt his influence had helped to make dentistry what it was. No one had been a greater pioneer, or had assisted the progress of dental reform more than his friend, Mr. Rymer.

The PRESIDENT submitted the next toast, viz. : "The Mayor and Corporation of Kingston-on-Thames, and the Surbiton Improvement Commissioners." He said the Corporation of Kingston was a very ancient one, but it was only since 1835 that they had been governed by a mayor, the chief officer prior to that date having been called a high bailiff. He made humorous allusion to the condition of the town when he first came to it, and spoke highly of the numerous improvements that had been carried out in recent years, notably the excellent system of sewerage and sewage disposal. The Corporation was second to none in the county of Surrey. So well was it liked that their neighbours at Richmond had flattered it in the most sincere manner by going in for a brand new mayor and corporation. Surbiton, although within the parish of Kingston, was a separate district, and was governed by a very efficient body of Improvement Commissioners,

and their district was one of the most healthy and attractive of suburban places. He associated with the toast the names of the Mayor of Kingston, and the Chairman of the Surbiton Commissioners.

The toast was heartily honoured.

The MAYOR said it was a source of very great pleasure to him to meet so many members of an honourable profession, who, he felt, had honoured the town by holding their annual meeting in it. He alluded to the time when the President and himself fought side by side in a municipal contest, and were both successful, remarking that he had continued to bear the burden and heat of the day, while Mr. Van der Pant had retired from public life, and had been busily engaged in piling up the gold.

Mr. GUILFORD also responded, and said it was curiosity that led him to accept the invitation to be present. They all knew how eminent in his profession the President was; but he happened to know how many poor creatures had been punished by men who had set themselves up as dentists, and he was anxious to see what manner of men the members of this Association were. He thought it was a grand day for the profession when they combined in such a way to raise the standard of efficiency, for he believed their action would confer untold benefit upon thousands of people, and he wished them every success. When they had succeeded in piling up the gold, he trusted some of them would retire amongst the beautiful attractions of Surbiton, where he could promise them a hearty welcome.

Mr. LAWRENCE READ proposed success to "The Benevolent Fund of the British Dental Association," which, he said, did an immense amount of good. Those who were present were men who were prosperous in life, but in all professions there were some who, through unforeseen circumstances, did not succeed in life—honourable men for whom they had every sympathy, and whom they could help in a practical manner by means of this Fund, which he commended to their kind consideration and support.

Mr. SMITH TURNER acknowledged this toast, and said they had now, he thought, some seven or eight children at different schools being cared for and educated at the expense of the Association. They assisted widows by purchasing furniture, and enabling them to let lodgings or otherwise to gain a livelihood, and sometimes they purchased a sewing-machine, which was an article in great demand. He thought it was most gratifying to members of the committee to be able to do it, and it would gratify every member of the Association if they could only know the circumstances under which they did it. With very great confidence and earnestness he commended the Fund to their liberal support.

A collection was then taken in aid of the Fund, and realised £2 12s.

Mr. HENRY proposed the health of the Visitors, with which he associated the name of the vicar of Kingston, who suitably responded.



Mr. PETTY submitted the last toast, which was that of the President. He said the pleasant trip which they had enjoyed on the river, the kind hospitality on board, the ability with which he had presided over the annual meeting, and the urbanity and geniality he had displayed that evening, met with the hearty appreciation of every member of the Association, and stamped Mr. Van der Pant as a model President.

The toast was drunk with musical honours and loud cheers.

Mr. VAN DER PANT, who was again cordially greeted, said he was very glad the members had enjoyed themselves, and personally he was most gratified with that day's business.

During the evening the company had the pleasure of listening to some really high-class part singing and solos by Messrs. Frost, Kenningham, Gawthrop, and Kempton. The dinner and speeches lasted till nearly ten o'clock, and it is a matter for regret that so many gentlemen had to leave before the Toast of the Benevolent Fund. *The Secretary will, however, be pleased to forward any contributions that Members, who had no opportunity of giving at the Meeting, would like to send him for that needy and deserving Fund.*

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### Eastern Counties Branch.

THE Annual Meeting was held in the Board Room of the Hospital, Lowestoft, on Wednesday, June 25th, Mr. AMOS KIRBY, L.D.S.Eng., in the chair. There were also present J. Fenn Cole, Ipswich ; H. W. Tracy, Bury St. Edmunds ; R. Payling, Peterborough ; B. W. Harcourt, H. F. White, and R. W. White, Norwich ; Alfred Jones, R. P. Lennox, G. Cunningham, and W. A. Rhodes, Cambridge ; S. A. T. Coxon, Wisbech ; W. Marsh, Colchester ; G. W. Stringfield, Lowestoft ; C. Smith, Northampton ; T. Muspratt Hall, Rock Ferry.

It was resolved that a number of letters received from gentlemen regretting their inability to be present at the meeting be taken as read.

The HON. SECRETARY read his report, showing a gain of three members during the past year.

The HON. TREASURER read his report, showing a balance in favour of the Branch of fifteen pounds.

After the re-election of Mr. Rhodes as Honorary Secretary,

Mr. G. CUNNINGHAM proposed a vote of thanks for the energy the Secretary had displayed in the business of the Branch.

The PRESIDENT : It goes without saying that Mr. Rhodes has our most hearty thanks for the able manner in which he has filled the office of Secretary.

The thanks were heartily accorded, and

Mr. H. F. White was re-elected Hon. Treasurer.

Messrs. Fenn Cole and B. W. Harcourt were elected members of the Council.

The Council recommended that the Parent Association be invited to hold its annual meeting at Norwich in 1892.

Mr. G. CUNNINGHAM said it was a serious matter, and the recommendation should be well considered. He believed if the meeting decided for Norwich, the Norwich men would take the matter up warmly, and would do all they could to make the annual meeting of the Parent Association successful. Of course the members of the Branch would have to contribute something tangible towards entertaining the Association. Much would depend upon what the local authorities would do for them. At Cambridge they had been saved much expense through the hospitality of the University. He moved that they invite the Parent Society to meet at Norwich in 1892.

Mr. PAYLING seconded the motion. He thought the Branch came out very handsomely at the last meeting they had at Cambridge, and he had very little doubt they would be successful in 1892.

Mr. G. CUNNINGHAM added the suggestion that a guarantee fund might be made.

The resolution was adopted.

The Council recommended that Mr. Payling, of Peterborough, be President of the Branch for 1891, and on the proposal by Mr. HARCOURT the recommendation was adopted.

Mr. PAYLING thanked the meeting for their kindness. He felt a responsibility had been placed upon his shoulders in having to follow such men as their President and his predecessors. They had been men of the right stamp. He should be pleased to see a good muster at their meeting at Peterborough next year. These meetings were useful in many ways to all. He believed that with the assistance of their Secretary there they would be able to make the Peterborough meeting successful. He (Mr. Payling) would rather have seen their old friend, Mr. Palmer, elected to the post. Mr. Palmer was an old standard practitioner of forty years' standing. Still, the meeting having elected him (Mr. Payling) he must do his best to fill the office.

A vote of thanks was accorded by acclamation to the hospital authorities for the use of the board room of the hospital.

Mr. G. CUNNINGHAM remarked that whereas at their annual meetings they had usually to suggest that a dental surgeon should be added to the Hospital Staff, it was worthy of special notice that no such recommendation was necessary in the case of the Lowestoft Hospital since one of their members already held the appointment of dental surgeon to that institution.

The PRESIDENT then read his address, which appeared in our July number.

Mr. G. CUNNINGHAM assured their President that his address was a

most interesting and valuable contribution to dental literature. On some occasions, if members were free to discuss and criticise the Presidential address, there was no lack of material, but on this occasion they could find nothing to criticise adversely. The President had given them such an amount of information of so interesting a nature that they almost felt inclined to ask for further information on some points treated in the address. He was sure that they could only regret the absence of their President through illness last year, and the address they had heard showed how much they had lost in being deprived of one from him last year. He proposed a vote of thanks to the President for the address.

This was seconded, and carried by acclamation.

The PRESIDENT acknowledged the thanks, and remarked that he had just thrown out a few hints for future consideration.

Mr. LENNOX then showed "Some further Applications of the Method of Crowning Roots shown last year," and other contrivances of interest in Mechanical Dentistry, and made the following remarks upon them :—

1. It is unnecessary to go into any great detail with regard to the crowns now shown. The method of proceeding was fully described last year in the case of incisors and canines, and but slight modification was required to meet the case of bicuspid and molars. The chief and only essential difference in the present case is that the crowns are secured to the posts by means of a septum attached to the mount at a suitable angle, instead of as before by means of the back of the tooth itself. The other points to be noticed are the returning of the back over the cutting edge of the porcelain face, to save something of the risk of fracture ; and the uniting of platinum and gold in making a mount. The purpose of the latter is to protect the gold, in any case where it is thought desirable to use it, from the action of the mercury in the copper amalgam filling. This device of lining gold with platinum is also useful in the case of bands.

2. The contrivance for preventing the lower plate from slipping forward in an edentulous mouth hardly calls for description, but a few words may be said about the case in which it has been applied. The patient had worn a set of teeth with springs for about twenty years, when, owing to the wasting of the alveolar process and other changes due to advanced age, the patient being now eighty-nine, the lower plate slipped forward and was only retained in the mouth by the pressure of the lower lip, which was made to protrude. In the first instance, it was hoped that a remedy would be found by simply making a new set on the same plan as before, but adapted to the present form of the mouth. This proving to be of no avail, a suction upper and a lower made of Watts' metal were tried. These the patient said she got on well with, "so long as she sat bolt upright." In other positions the lower slipped forward as before, and she had

the additional discomfort of feeling the upper drop a little. It was in these circumstances that the device now shown was thought of, with the result that the slipping forward of the lower and the dropping of the upper have both been got rid of. It may be feared that new difficulties have been introduced in the mastication of the food and the

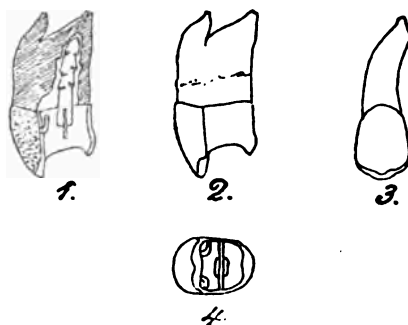


Fig. 1 shows a vertical section from front to back through the root canal of an upper bicuspid.

Fig. 2 a side elevation of the same before filling with amalgam.

Fig. 3 a front elevation of the same, showing the cutting edge of the porcelain face protected by returning the metal back over it.

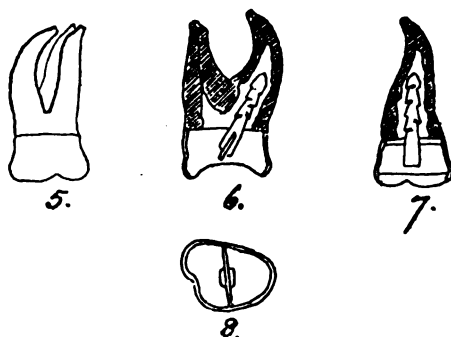


Fig. 5 is an elevation of a mounted upper molar.

Figs. 6 and 7 vertical sections of the same, showing the position of the post and its attachment to the crown by a septum.

Figs. 4 and 8 are plans of the artificial work before fixing.

clearing of it from the additional mechanism, but whether this will ultimately prove to be the case or not there has not yet been time enough to determine.

[AUTHOR'S SUPPLEMENTARY NOTE.—The patient has continued to wear the set of teeth above described. She finds that they serve

their purpose, and are comfortable in every way with the exception that she is unable to clear the right side of the mouth with the tongue alone, after eating.]

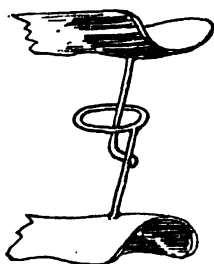


FIG. 9.

Fig. 9 shows the extremities (on one side of the mouth) of upper and lower gold plates carrying the contrivance adopted in the case of the edentulous mouth.

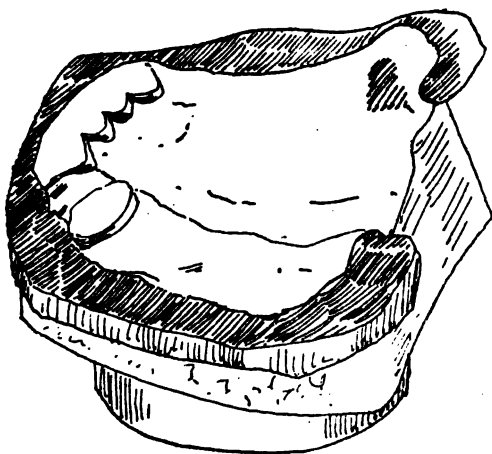


FIG. 10.

Fig. 10 shows a zinc model, with the clay in position for making a lead die of the kind described above. It also shows the cone obtained by the use of the Booth Pearsall flask.

3. The Booth Pearsall sand moulding flask and the method of making zinc models by means of it have been fully described in the Journal, and it is rather a method of using a model so made than one of using the flask itself that was intended to be shown.

A band of clay just moist enough to be plastic is wrapped round

the zinc just outside the limits intended for the gold plate, the object being to obtain a lead die into which the gold plate may be placed readily. With such a die, a plate somewhat larger than will ultimately be needed may be used, and the ordinary difficulty of getting the plate into the proper position for the first blow is obviated, while the part of the die formed above the clay band forms a perfect matrix to direct the blows of the zinc model.

The accompanying figures will help to make clear the several contrivances alluded to above.

After a short desultory conversation on this paper, the meeting adjourned to the Suffolk Hotel, the board room being at this juncture required for hospital purposes.

Mr. G. CUNNINGHAM next read his paper on "A New Method of Plate Work without Metal Dies," as follows :—

My friend, Dr. Michaels, of Paris, has requested me to describe and explain his very novel method of plate work, in which the numerous dies of zinc and lead, and the usual stamping up is avoided, and for that purpose he has sent for your examination and criticism the two actual cases which he prepared in the course of his demonstration at the International Dental Congress of Paris, last year. He claims for this process, that by enabling one to complete the case upon the first modelling plaster, a considerable economy of material, trouble and time is effected. In order to arrive at this seemingly impossible result—a metal plate without dies, and the necessary proceedings connected therewith—it is at once evident that some special and not the ordinary form of plate is essential to this process. Michaels' ductile metallic plate consists of the ordinary metal plate (gold, silver or platinum) passed through special form of rolling mills, by which one surface of the metal presents a series of small quadrilateral depressions, the centre of which rises in a kind of pyramid, with a base of about 1 mm., to about the height of the original thickness of the plate; the depressions penetrate to about  $\frac{1}{8}$ ths of the thickness of the plate in such a way as to destroy completely the rigidity and elasticity of the metal. The plate thus prepared from its being non-elastic, inert as it were, or ductile, is susceptible of receiving an impression under slight pressure, and of being applied even to irregular surfaces, and retaining the form thereof.

The following will give you a fair idea of Michaels' method of employing this specially prepared plate :—

1. Take a good impression of the mouth with gutta-percha, letting the impressions set sufficiently in order to prevent dragging.

2. Run the model in plaster and sand (two parts plaster and one part sand or marble dust) of about 3c. thickness, or, if one desires to keep a model of the mouth, run the first in plaster and make a duplicate model in plaster and sand for soldering purposes.

3. Adjust and mount the teeth on a wax plate just as one would

do for a vulcanite case ; if necessary try the plate for colour and articulation of the teeth.

4. Make the bands and place them with some pressure upon the model of sand and plaster.

5. With the bands in place, cut out a model in lead foil, such as you desire the plate to be, making some mark that will enable you to recognise the upper surface, place it upon the smooth surface of the metallic plate, draw the form with a steel point, and cut it out with a pair of scissors or shears.

6. Place the plate of gold with the smooth surface upon the model and press it into position by means of the fingers with a pressure sufficient to adjust the plate to all the inequalities of the surface ; the corners and the interstices ought to be adjusted with a burnisher or other suitable instrument.

7. Take some thin nails of about 12mm. in length, bend the nail about 1c. from the head at a right angle, and push the point into the plaster, leaving the head of the nail resting upon the plate of gold in order to retain it in position. One may place two or several of these nails, according to the dimensions of the plate.

8. Set the teeth upon the model, and fix them in position with a little hard wax ; run plaster and sand round the model and plate, in order to retain the teeth in position—when the plaster is dry clean out the wax with boiling water.

9. The spaces between the artificial teeth and the plate, as well as any spaces between the bands should be filled up by small pieces of thin platinum foil rolled into small pellets and pressed into place.

10. The piece being ready to solder, apply borax well and completely to the surface of the plate and the backings of the teeth.

11. Cover the entire surface of the gold plate with small pieces of solder (18 carat is to be preferred) and solder in a large flame ; put more or less solder according to the necessities of rigidity in the plate, but always in sufficient quantity to fill the depressions of the original plate.

12. The soldering terminated, cool the plate, clean in acid and polish.

Dr. Michaels thinks that vulcanite has so largely replaced the use of gold in consequence of the facility, as well as the small amount of time required in its use, and he considers this new method of gold work makes it equally facile and rapid as vulcanite work.

The process is ingenious, simple and rapid, and in cases of such small partial dentures as you see presented in these models, and to anyone who is in the habit of making these small narrow dentures I can certainly recommend it as worthy of a trial.

Mr. COXON said those who saw the plate made were of opinion that it was of an unscientific character. There was no strength nor elasticity in it. Further, the plate was uneven.

Mr. G. CUNNINGHAM thought they should be more careful in their remarks. To say that the process of Dr. Michaels was unscientific was simply absurd.

Mr. COXON understood that science might be defined as that which was productive of the best results.

Mr. G. CUNNINGHAM replied that the finished plate was quite strong enough for use and had considerable elasticity. Dr. Michaels was a practical, ingenious dentist. Anyone visiting Dr. Michaels' surgery would see at once that the doctor was a practical man. He (Mr. G. Cunningham) said he had confidence in his claims, and suggested nothing but a fair trial of the method. He only put before them that Dr. Michaels was certain that with his process he could make plates quicker than they could by the ordinary methods of dies and striking up.

After a warm and excited conversational discussion,

The PRESIDENT remarked they were indebted to Mr. G. Cunningham for the paper, and pointed out by actual trial that the Michaels' plate had considerable elasticity.

Mr. RHODES then read his paper on "Dental Departments in General Hospitals."

MR. PRESIDENT AND GENTLEMEN,—A contemplation of the subject of my paper, gives rise to a feeling of surprise when looking back on the long series of years that have elapsed since our forerunners in the dental profession first pressed on the medical world, and on the governing bodies of hospitals and dispensaries, the great need of establishing dental departments in the institutions controlled by them.

A great deal has been done in recent years towards giving our speciality a proper footing in the regular routine of hospital work, but a great deal remains yet to be done.

The enterprising student sees his chance and sets to work to obtain a little practice in tooth-drawing, which he rightly thinks may some day be of use to him, or it becomes the disagreeable and unaccustomed duty of the newly-appointed house-surgeon to remove, or otherwise, as chance may will it—for chance it is—these aching teeth. This is no fanciful or exaggerated picture, and it would not be at all difficult to find both students and patients to testify to the truth of it. There can be no possible objection to the medical student obtaining a knowledge of the art of extracting teeth, by all means let him do so, but it is one of the points of my paper that his practice should be obtained under the supervision of a dental surgeon, and as to the house-surgeon he should already have learnt something of it when himself a student. I do not, therefore, propose to discuss the question as to the desirability of establishing dental departments, we naturally are all agreed as to their utility; it is more to the purpose that the medical staff and governing bodies of hospitals also recognise their utility, as evidenced by the dwindling proportion, year by year, of hospitals without their specially-trained dental surgeons.



On looking around our own district it seems remarkable that the two great hospitals of Cambridge and Norwich should so tardily have followed the example of the London hospitals in appointing dental surgeons. I believe that Lowestoft actually had the start of Cambridge by two or three years. The Cambridge hospital, as you know, began well by appointing two dentists on its staff; Norwich as recently as last year appointed only one.

It is one of the objects of my paper to advocate the appointment of more than one dentist in the case of large hospitals. The unaided efforts of two men among a population of forty thousand inhabitants are as a mere drop in the ocean. What can one man do in the dental department of an infirmary in a town of one, two, or three thousand inhabitants? And yet such towns as Bristol, Leeds, Bradford and other large places where there is no school, are provided for on somewhat such a scale as I have described.

Possibly one reason why our speciality is not regarded in the important light it ought to be, as a recognised part of the general work of a hospital, is that the opinion is held that the mere extraction of teeth scarcely demands the help of the specialist. The patients themselves would have something to say about that, and they quickly show their appreciation of the specialist's services by turning up in ever-increasing numbers.

This, then, brings me to the question, "Can conservative treatment of the teeth be accomplished in the dental departments of general hospitals?"

The first impulse of a dentist who might be asked such a question would be to give an emphatic answer in the negative. A whole array of reasons why such a project would be impossible at once suggest themselves—the length of time the filling of teeth occupies, the limited number of hours a dentist can follow his occupation without undue strain—for a great part of the year he has pressing need for all the hours of daylight he can get for carrying on his own practice—all these and other objections leap into prominence in the second, and the answer is "No; it cannot be done!" We are driven, then, to the conclusion that the stopping of teeth and other conservative operations in the mouth, in dental departments of hospitals as now constituted, are impracticable. It remains, then, for someone to suggest a means of overcoming this one great drawback in connection with the charitable work undertaken by our so-called liberal profession using the term in its literal sense. I venture, then, to propose that these appointments should not necessarily be confined to one man, but there should be two, three, or as many as would be commensurate with the needs of the population, and why not so long as they were good men, and there was work for them to do? Of course it is understood that I am referring to the needs of towns in which there are no dental hospitals. Another suggestion is that we should utilise

the latent energy we possess in our pupils. There are many young men in the large towns now being trained for our profession, to whom a little preparatory clinical training before going up to the dental hospitals, might be of the greatest service, and the advantage of the poor be consulted at the same time. Of course I shall be met with the objection that the students would be taken from their mechanical work, and that they get too little of that already. Three or four mornings a week, or every morning except Sunday, the dental surgeon of the day being in attendance for an hour or two. This would not interfere much with the other work of either teacher or student, and this blot on our hospital work would in some measure be removed.

Should we wholly taboo this question of remedial treatment of the teeth of the poor because the results accomplished would be so comparatively meagre? Should we not rather remember that, although the results in the aggregate might seem ludicrously small in proportion to the need for our services, yet that the benefit derived in individual cases might be of the greatest value?

The dental department of a hospital should, in my opinion, be provided with every instrument for the removal of teeth, likely to be required; it should be possessed of a dental engine, for even if you do not stop teeth a ragged piece of enamel is more easily smoothed down with it than anything else; gas apparatus, scalers, burs, &c., and a proper cabinet to keep them in. The dental room in a hospital is too frequently a very makeshift sort of a place, and lucky is the dentist if he is provided with anything more than the regulation wooden chair, possibly such an one as we found at Addenbrooke's Hospital—a rickety piece of furniture, with a sliding head rest, such as is used by barbers, and such as a barber of these days would not be particularly proud of. However, the authorities of Addenbrooke's have been very generous to my colleague Mr. Jones, and myself, and we now possess all the apparatus I have enumerated.

Whatever you may think of my suggestions, at any rate I trust you will credit me with the courage of my convictions, and I append a record of work done by myself and Mr. Jones, as an earnest that something has been done to grapple with the ever-increasing decay of the teeth, especially among the class least able to afford the dentist's services.

I trust you will overlook the many imperfections of this paper. There are many questions arising out of the consideration of my subject not discussed in it, such as the matter of cost, but were I to go into these matters my paper would be much too long, and I should run a risk, if I have not done so already, of wearying you.

The work accomplished at Addenbrooke's Hospital last year without the assistance of students was :—

1889.

Number of Patients	...	...	...	...	1015
Under 14	...	...	...	...	248
Adults	...	...	...	...	767
Extractions	...	...	...	...	1162
Under Gas	...	...	...	...	39
Under Ether	...	...	...	...	11
Stoppings	...	...	...	...	77
Scaling	...	...	...	...	5

Mr. WHITE said he was to a certain extent on his own defence. He happened to be the only surgeon dentist in Norwich Hospital. At the same time he wished to give a rational reason why there should not be several. When it was suggested that five or six surgeon dentists should be admitted to hospitals, he asked whether it was expected they should be admitted as *confrères* of the medical profession, and also whether it was expected the surgeon dentists should have the same voting power as the medical staff. He believed it would not be done at Norwich because such a number of dentists would simply outvote the others. He quite agreed with the assertion that everything for dental practice should be provided by the hospitals. He found the greatest scope for his work among the children. He had an understanding with the members of the staff, that he was at perfect liberty to go into the wards and examine all the children whether medical or surgical patients. As a matter of deference he said to the staff such and such patients ought to have so and so done, whose mouths would be ruined if left without attention. Sometimes a good set of teeth was saved by removing the abnormal condition. On asking if there was any objection to such an operation being performed, he invariably received permission, and it was done. He wished to impress upon those present that it was among children that one could do the most good. He should be sorry to interfere with the ordinary case of extractions in a hospital. With regard to "stopping" he had not attempted it. His present idea was not to do it at the hospital. In cases where stopping the front teeth were required he has said if the patients liked to come to his house at 9 a.m. he should be pleased to do them, and he had done about thirty during the last two months. He did not feel that the day had come for "stopping," nor had the day come yet for a number of dental surgeons to be appointed to a hospital.

Mr. HARCOURT said he knew a man who, while hospital porter, had taken out hundreds of teeth.

Mr. G. CUNNINGHAM said that dentistry was a liberal profession, and those who followed it pretended to be big-hearted, and he wanted to see it put into practice. He regarded the profession as something more than extracting teeth, and maintained that some dental surgeons failed to prove it in their hospital practice. Although he had claimed

the right for the dental surgeons at Addenbrooke's Hospital to be placed on the same terms as assistant physicians or surgeons, he would be sorry to see measures of public benefit sacrificed on the mere plea of the impossibility to put all dentists on the Medical Board. He hoped that when opportunities arose Mr. White would use his influence, which they knew was great, towards securing their rights. Norwich or any other large hospital should grant the same recognition to dentistry as the Cambridge hospital.

Mr. COXON was glad to say that Wisbech hospital had taken up the matter of stopping teeth. Hospitals should find the necessary things for dental surgeons.

Mr. WHITE said he did not suppose the question would ever be raised by the staff of the Norwich hospital as to providing instruments. He asked them for a chair and got an order. He still saw a difficulty in "stopping" at the hospital, and he thought he should take the trouble to do it in his own house instead of doing it at the hospital.

Mr. G. CUNNINGHAM maintained that the work should be done in the hospital. The students in hospitals ought to know how a patient can be relieved of tooth-ache without taking out the tooth. It was an outrage to permit students to extract teeth without adequate instruction by a skilled operator.

Mr. WHITE did not think medical students were allowed to extract teeth without the surgeon first seeing the patients.

Mr. HARCOURT regarded dentists as specialists, and declared they were equal to the medical profession. He declined to be *patronised* by that profession.

Mr. RHODES said he did not mean in his paper to infer that a dentist in practice could give time for stopping teeth. At Cambridge hospital they had a good supply of instruments, which cost, he believed, about £60.

In reply to a question, Mr. WHITE said the instruments belonging to the hospital would necessarily be in the cabinet and would be at the service of the surgeon, and he had a duplicate key.

The PRESIDENT said the hospital question was not solved, and it was not solvable at present. Of course there was an objection to students operating, but it was not possible that the work could be done without them in large hospitals. No doubt in some general hospitals a portion of the out-patients were seen by the students.

The discussion closed, and the members were entertained to an excellent luncheon at the hotel as the guests of the President.

In reply to a vote of thanks, the PRESIDENT said he was exceedingly glad to have the members as his guests. He hoped to have the pleasure of meeting them in other towns. He felt he had suffered loss through not having been able to attend the annual meetings of the Branch during the last two years. He believed these meetings

did them a great deal of good, and that they (the meetings) took a great deal of conceit out of them, by shewing how many others were doing excellent work.

Mr. G. CUNNINGHAM explained his system of lectures on the care of the teeth, illustrating his subject by means of the limelight.

On the conclusion of the address a hearty vote of thanks was accorded him for his interesting remarks, and the following resolution was passed :—" Having heard Mr. George Cunningham explain his method of diffusing popular knowledge on the care of the teeth by means of limelight illustrations, we as a branch approve of his work in this direction in the past, and are of opinion that much good would result were better provision made for such lectures to the public at large."

In the evening the members dined at Suffolk Hotel, and the visitors present were Mr. Jackson and Mr. Roberts, resident medical surgeons, Mr. Worthington at the last moment being unable to be present. The President presided, and Mr. Payling filled the vice-chair.

The toast, "The Queen and the Royal Family," was proposed and received with musical honours.

The PRESIDENT proposed "The Army, the Navy, and the Reserve Forces," with which he coupled the name of Lieut. Payling.

Lieut. PAYLING, in responding, remarked that unless a volunteer could make a certain number of points at firing he was no use. He strongly recommended that medical examination should be extended to the auxiliary forces. He was sure there were many men in the volunteer service whose eyesight was defective, and that was the reason why the marking at the target was so bad. He was sorry to have to confess that the volunteer force was poorly officered, owing to the fact that men in position would not come forward. Surely, if artisans and men in the ordinary walks of life gave up one evening a week to drill and a week in camp, there ought to be plenty of gentlemen ready and willing to take their positions as officers.

Mr. H. W. TRACY proposed "The health of the Medical Profession," coupling with it the names of Mr. Jackson and Mr. Roberts. He hoped that all had pleasant relations with the medical profession. He was on cordial terms with them.

Mr. JACKSON, responding, said he much regretted the senior surgeon in the town was not able to be present. It gave him (Mr. Jackson) great pleasure to be with the members of the British Dental Association. He was sorry that the gentlemen of the medical profession were not informed that the Eastern Counties Branch of the Dental Association was coming to Lowestoft. Had they known it, he was sure they would have endeavoured to make the visit of the branch to Lowestoft as pleasant as possible. It was important that the dental and medical professions should be on cordial terms. One

could not get on well without the other. When it was considered the intimate connection of certain diseases with the teeth, it was quite evident that both professions should work together for their mutual advantage. He had had every courtesy shown to him by the dentists in Lowestoft and in other towns.

Mr. ROBERTS said he had studied a partial course of dentistry under Mr. Cunningham at Cambridge University. He believed in the necessity for all medical men to know something of dentistry and to pay strict attention to the condition of teeth of their patients. In a great measure the health of the body depended on the condition of the teeth. All his relations hitherto with dentists had been most friendly and cordial. While he was at Cambridge Hospital he had not the chance of working with the dental students, but while he was at Guy's medical and dental students worked side by side. He concluded by proposing "The Eastern Counties Branch of the British Dental Association," with which he coupled the name of Mr. G. Cunningham.

Mr. G. CUNNINGHAM said in Mr. Roberts they had the first fruits of the educating influence which they as a branch considered one of their important functions. Their object was to bring about a closer union and to remove the mistaken notion which a large number of the medical profession had with regard to dentistry. The two professions had been living apart, but now they were beginning to work with each other. In some general hospitals there was a dental department as fully equipped as any special school. Referring to the British Dental Association, the doctor said the energy of it was to a great extent curtailed because of the limited condition of the funds at its disposal. He could honestly say there was no waste of money. Besides other advantages members had a good Journal, and altogether he thought the members received good value for their guinea subscribed to the Parent Association. Although members of the branch had expressed great difference of opinion on certain matters they were none the less friends for having the courage to express those opinions. It would be well for them to let the executive in London know that they had the full sympathy and generous support of the branch. He considered that they might congratulate themselves on their visit as a branch to Lowestoft, and he hoped this would not be the last time they would come there. A large share of the success of their meeting was due to the genial courtesy of the gentleman who sat in the chair.

Mr. WHITE in proposing "the health of their Honorary Secretary" (Mr. Rhodes), said many of them perhaps were not aware of the enormous amount of work which had to be done. Until looking into the matter he certainly was ignorant of a great deal of the working. Not only had their Secretary to keep in touch with all the members of the branch, but he had to see to the Treasurer and that all the subscrip-

tions were duly got in ; to get in as many new members as possible, or to induce others to get new members. He was also a sort of delegate to attend the meetings of the Parent Society. They appreciated the time their Secretary had spent in the working up of the branch, and also the kindly way in which he had received all suggestions from every member. He hoped Mr. Rhodes would be their lifelong Secretary.

The toast was drunk with musical honours.

The SECRETARY said he had the interest of the branch at heart. His object was to further the interests of the branch in particular and of the whole Association in general. He thought there was a necessity for some of the members to do a little work. It appeared to him that they left him to get all the members, but he would urge each and all of them to try and get members. Those dentists who stood aloof did not know what they missed by not belonging to the Association. He wished to impress upon the members that if they had any matters to be brought before the Board of the Association, they should express their wishes to their representatives. He advised them to look ahead for the Norwich (should it be held there) Meeting in 1892. They must be prepared to discuss the matter at their branch week at Peterborough next year. He hoped every member would put his shoulder to the wheel and do what he could. As regarded the Norwich men, he knew the members there would do all in their power to make the meeting a great success. It only remained for them to keep together and work well, and then they would be a successful branch of the British Dental Association.

Mr. WHITE proposed "the President," and the toast was drunk with musical honours.

The PRESIDENT briefly responded and the social proceedings terminated.

Songs were given by several members during the evening.

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### Western Branch.

THE Annual Meeting will be held at the Rougemont Hotel, Exeter, on Wednesday, August 20th, 1890.

5 p.m.—Meeting of the Council.

6 p.m.—General Meeting of Members for the transaction of business.

In consequence of the British Dental Association holding their Annual Meeting this year in Exeter, on August 21st, 22nd and 23rd, the Meeting of the Branch will be for business only.

Subscriptions due August 1st should be paid to the Honorary Treasurer, J. T. Browne-Mason, 6, Southernhay, Exeter.

Gentlemen wishing to be elected Members should make early application to the Hon. Sec., Henry B. Mason, 3, Bedford Circus, Exeter.

### The Benevolent Fund.

THE following new Subscriptions and Donations to the Benevolent Fund of the British Dental Association have been received by the Treasurer since January 1st, 1890 :—

#### *Subscriptions.*

Bennett, Storer, 17, George Street, Hanover Square, W.					
(increased from £1 1s.) ... ..	£5	5	0		
Butcher, J. O., 26, Harley Street, W. ... ..	1	1	0		
Cooper, C. H., 12, North Parade, Bradford ... ..	0	10	6		
Greaves, J. E., 36, Hyde Park Road, Leeds ... ..	0	10	6		
Greenfield, John, 11, Brook Street, Hanover Square, W...	1	1	0		
Grove, H. N., 11, Park Street, Walsall ... ..	1	1	0		
Maggs, W. A., 16, Hanover Square, W. ... ..	1	1	0		
Mansell, Thomas, 29, Hamilton Square, Birkenhead ...	1	1	0		
Read, Lawrence, 18, Hanover Street, W. (increased from					
10s. 6d.) ... ..	1	1	0		
Rogers, Joseph, 16, Hanover Square, W. ... ..	1	1	0		
Shelton, J. A., 3, Pinchbeck Street, Spalding ... ..	1	1	0		
Spokes, Sidney, 59, Queen Anne Street, Cavendish					
Square, W. ... ..	0	10	6		
Trollope, W. T., 42, High Street, Tunbridge Wells ...	0	10	0		
Wallis, C. J. Boyd, 23, Brook Street, Grosvenor Square,					
W. ... ..	0	10	6		
Welch, J. E., 44, Norfolk Square, Brighton ... ..	0	10	0		
Williams, Bertram, 22, Wellesley Road, Croydon ...	0	10	6		
Williams, Cecil, 22, Wellesley Road, Croydon ... ..	0	10	6		

#### *Donations.*

Fletcher, Thomas, 4, Museum Street, Warrington ...	5	0	0		
Gartley, A. L., 50, South Mall, Cork ... ..	1	1	0		
Greenfield, John, 11, Brook Street, Hanover Square, W.					
(in addition to Subscription) ... ..	1	1	0		
Iliffe, John, 177, Collins Street East, Melbourne, Aus-					
tralia ... ..	1	1	0		
Mallan, G. Prescott, 30, Monmouth Road, Westbourne					
Grove, W. (in addition to Subscription) ... ..	2	2	0		
O'Duffy, John, 54, Rutland Square, Dublin ... ..	0	10	0		
Collected in Box at the Meeting of the Midland Counties					
Branch of the British Dental Association on Feb. 1st					
(per Sidney Wormald) ... ..	7	0	6		



Collected in Box at the Meeting of the Southern Counties Branch of the British Dental Association on March 29th (per Morgan Hughes) ... ..	£1 2 0
Collected in Box at the Meeting of the Central Counties Branch of the British Dental Association on March 20th (per W. Palethorpe) ... ..	0 10 6
Collected in Box at the Meeting of the Midland Counties Branch of the British Dental Association on May 9th (per Sidney Wormald) ... ..	7 0 0
Collected in Box at the Meeting of the Irish Branch of the British Dental Association on June 10th (per W. Booth Pearsall) ... ..	1 10 0
Collected in Box at the Meeting of the Southern Counties Branch of the British Dental Association on June 21st (per Morgan Hughes) ... ..	2 12 0

## ORIGINAL COMMUNICATIONS.

### Professional Fads.

By H. C. QUINBY, L.D.S.I.

LOOKING over the pages of the annual report of the *Transactions of the New York Odontological Society* for 1889, it has been impossible to avoid a feeling of admiration for the able manner in which Dr. Bogue has presented his ideas, in a paper entitled, "A Study of the Visible Changes which take place during the Development of Human Teeth and their Alveoli."

The matter is clear and well-expressed, and the illustrations are beautifully drawn. The paper is a protest against the practice of extracting the six-year molars as a means of preventing decay, and, ably as the case is presented, I cannot help but look upon it as another of those curious fads—if I may be allowed such an expression—which have been taken up by our profession from time to time during the last forty years, and made to serve as a test-question which should prove a man's right to be considered a scientific practitioner of his profession, or consign him at once to the limbo which is proper for those on the left hand.

I once had occasion to say that it was very unwise to think that because a little of a thing was good, therefore a great deal of that thing must be better. It is a good thing for a professional man to have an idea of right and wrong practice, but it is possible to be a bigot.

Our practitioners, some of the best of them, are apt to bind themselves to fixed rules when they know themselves to be in the professional groove ; to have these rules always before their eyes, to be pushed, often enough, to the utmost extreme, and to make their cases adapt themselves to rule. Naturally enough also, with such short-sightedness, they so persuade themselves that theirs is the right way that they are unable to see anything good in any other way ; and I think, also, that there is in our profession too little of that independence of thought and feeling which makes a man stand up for what he believes to be right when a majority of practitioners may be opposed to his views, to decline to walk in a beaten track because it is the beaten track, and to strike out a new path when he clearly sees a light in a new direction, without a moment's hesitation or fear of what his neighbour may think of his seeming heterodoxy.

Forty years ago, in America, it was as much as a man's reputation was worth to put an amalgam filling in a tooth. Every obnoxious epithet in the professional vocabulary was heaped upon a man who dared to do such a thing, and few men had the courage to do it, except in the mouths of those who might safely be trusted to keep the secret. It was putting poison under the tongues of innocent patients, and ptyalism was the least harmful result that could be expected to follow. This idea held sway longer than most of the fads which have been held as tests of honest practice, for it was more than twenty years before men dared venture to intimate that they had tried this dreadful thing, and had not found it resulted fatally ; but the heresy has now found its way into the practice of every operator.

The next attempt of the poisoner to destroy the profession as well as the patients was the introduction of vulcanite as a base for artificial teeth. This was putting arsenic, as well as mercury, in the mouths of the patients, and certainly no man who had the slightest regard for his professional reputation would ever use it ; but, nevertheless, it has found its way into the laboratories of most practitioners.

Gutta percha, as a stopping for the teeth, was thought to be a most demoralizing idea, tending to the destruction of self-respect in every practitioner who put his trust in it ; but under the disguise of "temporary filling" it gradually found its way to usefulness.

There was a battle royal over cohesive and non-cohesive gold,

but this did not take such deep hold upon men's prejudices as to make the advocates of the one preparation deny respectability to those who preferred the other.

Then came the great question of saving the vitality of pulps. The man who destroyed the pulp of a tooth was a criminal, and deserved to be "hailed before the judges" for mal-practice. Pulps must be preserved in whole, if possible, but if a part was too much diseased, that part must be "amputated" after every expedient had been tried—no matter how much the patient suffered—to restore it to health, and the remnant must be "capped" and saved. There was no doubt about it, this was the real test of honest practice; and even now in many minds, it is a *sine quâ non* of good professional standing for a man to cap every exposed pulp and save it alive; but many men who at least mean to be honest, have proved that capped pulps will be so ungrateful as to die of their own accord, and make a great deal of general disturbance by thus passing away and neglecting to "make an effort."

It would appear to be taken for granted, by men who cry so loudly against pulp extirpation, that the pulp is an essential part of a tooth in the mouth of an adult, and that there cannot be any hope of comfort and usefulness in a tooth if the pulp is lost; yet we all know, and these men know well enough, that this is not the case. Teeth which have lost their pulps, and have had proper treatment subsequently, stand side by side with other teeth which have living pulps, and the one is quite as comfortable, as useful and as durable as the other. What then is the objection to the extirpation of the pulp? I quite fail to see that there is any reason for the retention of a pulp which has become exposed by decay, or has become troublesome from any other cause; and we all know that if the pulp dies without our assistance, as I believe it will do in every case of absolute exposure, it causes far more serious complications than could ever arise from its extirpation by the ordinary treatment. Granted that it is a misfortune to lose the pulp of an immature tooth; but even in such cases as these, I believe careful treatment will preserve the teeth long enough to fully compensate the patient for the trouble we take, and I think it will be admitted that a case of pulp exposure in an immature tooth is more difficult to treat successfully, with ultimate preservation of its vitality, just in proportion as development of the tooth is incomplete.

But the last crusade is against the extraction of any teeth, more especially, however, the six-year molars, as a means of preventing decay in the rest. All sorts of things go wrong as a consequence of this unprofessional (?) practice; the bite is shortened, irregularities are caused, and facial development is arrested. But, notwithstanding this serious indictment, I do not hesitate to say that the extraction of an upper and a lower tooth from each side of the mouth is, in a large proportion of cases, a very necessary step towards the saving of a reasonably useful set of masticating teeth, and that unless there is some very important indication that other teeth than the six-year molars should be selected for extraction, I should choose those four teeth as most likely to give us the result we seek. The teeth to be extracted must be two antagonising teeth on each side. There can be no appreciable advantage to the mouth as a whole if the teeth extracted are not such as meet each other fairly when the mouth is closed. They must not be removed until after the twelve-year molars are fully erupted, so that they meet each other fairly when the mouth is closed; this being a matter of development and not quite a matter of years, as the eruption of these teeth varies from ten to fifteen years. I have known a case where they were fully erupted at nine years of age. The fullest possible degree of benefit to the mouth cannot be gained by premature nor by delayed extraction. They must be extracted all at once if possible; but if this is not possible, the utmost concession which can be made is to have two taken from one side at one sitting, and the other two at a second sitting within a month.

If these important conditions are observed, I do not believe there will be any perceptible shortening of the bite, nor that any irregularities will result more important than some slight malocclusion, and this not very often; and the only possible arrest of development will be that of prominence of the teeth and lips—a kind of development which is not conducive to beauty of face. I may add as a personal experience, that in a long and extensive practice, I have treated numerous mouths in this way; and I have yet to see a case where, the foregoing instructions having been observed, I have cause to regret the treatment; while I have seen many cases in which from my own indecision, or because I was not permitted to have my own way, I have deeply regretted the attempt to save a good set of teeth by other treatment.

Only a few days ago I had under my care a young girl of

seventeen, with twelve good teeth in the upper jaw, as even and regular as one could wish to see, while in the lower jaw four molars and three bicuspid were utterly and hopelessly broken down to the gums. She had two upper molars extracted a few years ago; she could not tell me the date, and the wisdom teeth had not erupted, but nothing had ever been done to the lower teeth, and they had evidently broken down from approximal decay in time to prevent any interference with the arrangement of the upper teeth. There was not a sign of any approximate decay in the upper teeth, but a few small grinding surface cavities in bicuspid and molars.

The business of a dentist is to prevent decay as far as possible, to restore and repair when necessary, remembering always that the highest and purest art is to conceal the restorations and to preserve the greatest possible number of useful and comfortable teeth. He must be watchful, for decay is rapid with growing boys and girls, but I sincerely believe that it is better to have twenty-eight or even twenty-four fairly good teeth in the mouth than to have thirty-two, and to be always in the hands of the dentist.

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### Address Delivered at the Annual Distribution of Prizes of the Dental Hospital of London.

BY THOMAS UNDERWOOD, L.D.S. ENG.

ON such an occasion as this when you have received these prizes and certificates, and you who have deserved them, or have struggled hard to obtain them, are bidding good-bye to the happy days of student life, and moving into the great world with its fiercer struggles, sharper disappointments, and keener triumphs, it seems to me to be a salutary thing that a word or two of counsel should fall from one with whom time galops, on the ears of those with whom he still ambles, nay, even crawls. What is said under these circumstances by an old man to young men, must not, I am fully aware, be too long; yet it is only once in the life of each that he turns from the life of preparation to the life of reality, and at such a time he may do well to listen for a few minutes to one who has had half a century the start of him, and to whom the professional struggles upon which he is about to enter lie already in the past.

Gentlemen, you have as students enjoyed exceptionable advantages, it remains to be seen what use you will make of them. You have been educated at a school, which I do not hesitate to describe as one of the most perfect of its kind existing in the world. I am not going to weary you with the thrice told tale of what the educational and professional life of a dentist was in my early days. The story of the meagre educations, the petty rivalries and distrust of those early days has been told again and again. There is only one comment I will make upon these the dark ages of dental surgery, and that is, that despite the want of systematised education and a liberal professional spirit these same years of darkness and trouble produced some grand specimens of noble, unselfish workers for our common cause, men who thought but little of themselves, and all of the good of their profession ; men who practically educated themselves and found time besides to lay the foundation stone of the splendid system of education and organisation which you inherit. They were strong men, strong fighters, with unselfish love of their calling and deep enthusiasm for the cause—such men as are almost always to be found where there are battles to be fought and obstacles to be overcome ; in the birth of great movements such men generally come to the fore, and the best I can wish you, gentlemen, is that your generation with all its advantages may be found equal to the occasion, and capable of producing men with the same grit and backbone.

It is not, however, of the past or its records that I intend to speak to you to-night, but rather of the future. When you leave here what are you about to do? What do you propose to yourselves as the future of your career? I assume success in life, and I wish to consider what success in life is, and what qualities and means will be most likely to ensure it.

Success in life is very variously understood by different people, indeed there are some who earn their living by the practice of our art, whose *beau ideal* of success in life seems to me to be a complete failure.

I have heard of a man of some celebrity of whom a pithy description was given. "Dr. — is quite an able man, in a commercial sort of way." Such a reputation, gentlemen, is not professional success.

There is a rumour about that a man to whom a scientific reputation would be a convenience "in the way of business," found it was a one-horse affair not to have discovered something. Soon

after his name appeared as the compiler of a paper which was, read in due course before a learned society, and which was exquisitely illustrated. The mastery of the subject displayed in the paper surprised the author's acquaintances, until it was suggested that a cheque for a considerable amount had been paid for the production. The reader of the paper obtained applause and reputation for science, the author money, but did either achieve a merited success.

I mention these cases to point the moral that money is not synonymous with success, nay, more, I believe that nothing injures or degrades a man's moral nature more than the persistently placing this idol before his eyes as the one thing to aim at.

Do not think in your young enthusiasm that I am warning you against a danger which does not exist, unfortunately it does ; I see it every day creeping around men of promise and strength, hampering them in their struggle for what should be their real good.

I think that the success in life which best bears the severe test of looking back on, the success which, so to speak, leaves the pleasantest taste in the mouth, is the feeling that one has added in some measure, and at some cost of self sacrifice, to the great common fund of professional knowledge and welfare, whether by good, honest work in science (by honest I mean done for science, and not to indirectly advance one's money-making machinery), or by the guidance of the political fortunes of the profession, if your gift lies that way ; each man has his gift—it has been given to him, let him in his turn give and *not sell* it to his fellows, and thus attain success in life.

And now what quality do I think best calculated to ensure such success ? I answer, without hesitation, enthusiasm—for enthusiasm is unselfishness. Genius, talent, ability, may all be turned to other ends ; but genuine enthusiasm means that a man will give up himself for a cause. It is rare ; be not you the men to make it rarer still.

Look at our Dental Hospital of London, as it now exists, with its elaborate scheme of education. What built it ? Enthusiasm.

Look at our Dental Reform, the half a century of struggle, the now rapidly accumulating fruits. What produced it ? Enthusiasm ; not hasty impatience that is too hasty to tolerate reform which does not immediately produce the desired results, but the same spirit which actuates a true gardener who plants and cares for that—the fruit of which he may never see.

In the past history of your profession you have glorious examples, it is for you to make out the list of the future ; but do not, I beg of you, think, What shall I get out of it ? but what is the greatest amount of good I can do to others in the exercise of my calling ?

Last of all, ever listen to the voice of conscience, the very voice of Almighty God Himself, and you never can go wrong ; if you are in doubt as to whether any course is right or wrong, do not do it ; there can be no doubt as to what is right with our conscience. Learn to be unselfish (the thing is hard, but it can be done), and believe me when your hair is white and your work done you will feel that you have attained true success in life.

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### A Method of Root Filling.

By CHARLES S. TOMES.

I HAVE for some little time past been employing celluloid as a root filling, and this material appears to have some advantages over the others which are in ordinary use. For the purpose of carrying the sensitive photographic film celluloid is now prepared in exceeding thin sheets. After melting off the gelatine film from a spoilt negative, exceeding fine strips can easily be cut from the edges with sharp scissors. These are of course square, which in practice seems to be no objection, but they can easily be rounded by rolling them after a slight moistening with collodion.

The strips so prepared have considerable stiffness, yet are fairly flexible and very tough. They may be made of any size you please down to that of a tolerably fine Donaldson bristle, and by grasping them in plugging forceps they can easily be made to pass up the whole length of any fairly pervious root. The *modus operandi* is this : A strong collodion is prepared, to which camphor is added in the proportion of a dram to the ounce. The root canal, previously dried as completely as practicable—it may be wiped out with absolute alcohol—is then mopped with a wisp of ordinary cotton dipped in the collodion and carried on a Donaldson bristle, and the canal, if possible, left full of collodion ; the strip of celluloid is picked up in plugging forceps, dipped in the collodion, and coaxed up the root ; as it takes the collodion some minutes to soften it much this is easily done. Then several Donaldson bristles previously armed with wisps of *gun cotton* are used, but they are not dipped in collodion. These wisps have to be rather



rapidly carried up, as the collodion already in the root softens them very speedily. Clean Donaldson bristles are worked up into what is now a pasty mass, and if need be more gun cotton introduced. Sometimes it is convenient to introduce more fluid collodion, this being best done with ordinary cotton. This method of procedure obviously admits of being varied in many ways. Thus several celluloid strips may be introduced side by side and then flooded with collodion, or the celluloid strips may be left out altogether, wisps of gun cotton being employed from the first. In this latter case the first piece, at all events, should be introduced before there is much collodion in the canal, else it will be dissolved before it is carried well up the root, a subsequent flooding with collodion sufficing to melt it into a uniform paste.

The advantages which I believe this method secures are: (i.) that in the celluloid strip something is introduced the length of which is known, and it is never again withdrawn, so that one is sure that the root filling goes well up so far at all events; (ii.) that there is nothing at all approaching to a pumping action, the gun cotton subsequently packed in (if any) being so soon softened into a paste; (iii.) that the material employed is antiseptic and absolutely non-irritant.

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### The Administration of Chloroform.

BY THE LATE DAVID FLETCHER, Sydney, N.S.W.

I BEG to state that I have always been deeply interested in the practical study of chloroform, and that as a dentist carrying on business in Wynyard Square, Sydney, for nearly forty years, I have had some experience of its administration, and nothing of an unpleasant nature has ever occurred during all that time; in fact I have at last come to look upon it as merely a very harmless intoxicant.

I hope to be allowed to refer to what has been said by a number of men of science as reported at the ninth annual meeting of the British Dental Association. Mr. Cruise commences by stating that he wishes to make his communication "brief and purely practical"; he then goes on to narrate that for twelve years he was constantly engaged in chloroforming patients for operations, and admits that during that period he suffered terrible anxieties, so much so that he even still looks back upon it with

horror. It has been said by Sir James Simpson that a nervous person should never attempt to administer chloroform.

I am glad to learn that Mr. Bowman MacLeod is much in favour of chloroform in preference to other substitutes, he says that what is absolutely necessary is to feel the breathing.

Mr. MacLeod finishes with the following :—" Each new general or local anæsthetic has been hailed as the champion which was to unseat chloroform from its throne ; yet amid all the din of opposition it has not only held its own, but gradually and steadily maintained its supremacy, and it remains to this day the one anæsthetic which best meets the varied requirements of serious, delicate or very painful operations, and notwithstanding the many charges mostly unjust or exaggerated which have been laid at its door, still remains supreme, the one most used by surgeons, the one most appreciated by the patient."

I shall not say a word about nitrous oxide, which in my practice I can well afford to do without, and only wish to say a few more words about chloroform. First let me ask why we give an anæsthetic? To save pain? Not to save pain only but so that in a difficult case sufficient time may be taken in the extraction of the teeth and the jaw left uninjured.

Someone speaks of a gag, a thing to keep the mouth open, letting the breathing take place through the mouth instead of the nostrils. Oh ! shade of George Catlin !

Let me state a case. A lady requires to have three lower molars extracted, the middle one (the six year old) decayed level with the gum, the other two not much better, and the mouth much inflamed. What could I do without a bottle of Duncan and Flockhart, and the forceps of grand old Jean Evrard ! As arranged the lady brings a female friend to attend on her. The patient is placed in one of the old-fashioned roomy chairs and her dress quite unfastened, so that as Mr. Bowman MacLeod recommends, her breathing may be felt, which is best done by gently pressing and then relieving the lower part of the abdomen when required, so as to produce deep expiration and inspiration during the time of anæsthetization. On a napkin which when folded four ply, presents a surface of about fourteen inches, and having with my hand hollowed it in the centre, I pour as much chloroform as will quite saturate the greater part of it, then holding it high above the patient's head, and some distance away, I wait the result, I do not speak or ask her to smell it, knowing that will take place

without any effort of hers ; in approaching the napkin closer as I stand over her, I can see as I look down her face that the chloroform does not touch her nose. Her mouth I observe is quite shut as is always the case under chloroform, I now only wait for relaxation of the jaw to remove the teeth ; I attend to the bleeding with a sponge and small basin. I then let her lean back in the chair while I chat with the lady friend and my son, who is my assistant, and wait for the patient's returning consciousness, and never resort to slapping with a wet towel. I need not give another case ; they are all nearly alike, as far as chloroform is concerned.

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## LEGAL INTELLIGENCE.

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### *Regina v. G. D. Horton.*

MESSRS. MILWARD AND Co., solicitors, of Birmingham, have carried through a prosecution for a breach of Section 3 of the Dentists Act. Horton was represented by counsel, and pleaded inadvertence. The magistrate considered the case proved, and inflicted a fine of 20s. and costs. A more detailed report will appear in our next issue.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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### Dental Hospital of London.

#### PRIZE DISTRIBUTION.

THE annual conversazione and distribution of prizes of the above hospital was held on Wednesday, July 23rd, at the Stanley and African Exhibition, when a large gathering of friends and supporters of the hospital was present. Mr. Thomas Underwood distributed the prizes to the successful students, the following being the recipients :—

Saunders' scholars, T. Coysh, A. C. Gask and W. May ; Ash's prize (given by Messrs. Ash and Sons), E. R. Bull ; 2nd prize (given by school), W. May ; certificate, A. C. Gask.

*Class Prizes, Winter Session, 1889-90.*—(*Mechanical Dentistry*) 1st prize, T. Coysh and C. Schelling ; certificates, W. May, C. F. Badcock and E. R. Bull. (*Metallurgy*) 1st prize, A. C. Gask ; 2nd prize C. Schelling ; certificates, W. May, C. F. Badcock and E. R. Bull.

(*Prize in Operative Dental Surgery*) 1st prize, W. May ; 2nd prize, E. H. L. Briault ; certificates, C. Schelling and M. Woolf.

*Class Prizes, Summer Session, 1890.*—(*Dental Surgery*) 1st prize, T. Coysh and A. C. Gask ; certificates, W. May, E. R. Bull, C. J. Allin, L. C. Tomlyn and C. F. Badcock. (*Dental Anatomy*) 1st prize, W. May ; 2nd prize, T. Coysh ; certificates, E. R. Bull and C. F. Badcock ; Students' Society prize, M. Woolf.

At the conclusion the CHAIRMAN rose, amidst prolonged cheering, and addressed the students, a full report of which will be found on another page.

At the termination of his address Mr. SMITH TURNER, who was also received with enthusiastic applause, proposed in a few well-chosen words "That a hearty vote of thanks be accorded to Mr. Underwood for so kindly presiding."

This was carried with acclamation, Mr. UNDERWOOD briefly replying.

During the remainder of the evening an excellent selection of music was given by the Graves' Orchestral Company, many of the items earning well-deserved encores.

Refreshments were served in the gallery, the guests leaving by about eleven o'clock, with the opinion, we feel sure, that a very pleasant evening had been passed.

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### Edinburgh Dental Hospital and School.

THE half-yearly meeting of the Edinburgh Dental Hospital and the distribution of prizes in connection with the school took place on the 22nd ult. in the Board room, 5, Lauriston Lane. The chair was occupied by Sir WILLIAM TURNER.

The DEAN (Mr. Bowman Macleod) reported that nothing during the past year had occurred to detract from the pleasure of superintending the work of the school, and he was happy to report that the number of students attending the school had not only been maintained but was gradually increasing. This was in a large measure due to its being situated in a great world-famous medical centre, but more so to the excellent systematic training afforded by the teachers attached to the school, to the painstaking character of the instruction given by the demonstrators and tutors, as well as to the hearty co-operation and personal interest evinced by the officers attached to the hospital side of the institution. The attendance of the students had been regular, and their attention to work assiduous. The number of cases treated at the hospital during the year ending 31st December was 8,142. During the past six months ending 30th June 4,215 operations had been performed, namely:—Stoppings, 2,079 ; ordinary extractions, 1,936 ; anæsthetic cases, 150 ; class cases, 20 ; and mis-

cellaneous cases, 30. Special attention was drawn to the fact that the number of stoppings during the past six months was much greater than the number of extractions. The public were beginning to recognise the fact that teeth were not only worth having, but that they were worth saving and retaining.

The report was adopted.

The CHAIRMAN then presented medals to the following gentlemen who had gained distinction in the school during the session:—General excellence in the senior division, J. H. Jameson; and junior division, G. Bonnalie and H. Perkin; dental anatomy and physiology and dental mechanics, John William Daniels (two medals); John Cromar, dental surgery and pathology; John Mason, special prize. The Chairman remarked that Mr. Murray Thomson had been running Jameson pretty closely, and although he had not got a medal yet he had the consciousness that the work and attention he had paid would no doubt bring him success in his profession in life. As a member of the Medical Council, the Chairman said that he had been cognisant of many matters connected with the general progress and advance of the dental profession, and he was happy to say that the progress in dentistry had taken place from a desire within the profession itself to improve not only its status but also its education and its means of doing good.

A vote of thanks to the Chairman brought the proceedings to a close.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

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### Case of Poisoning by the use of Sulphate of Atropia in the Process of Tooth Stopping.

UNDER THE CARE OF JAMES CANTLIE, M.B., F.R.C.S.,  
of Hong Kong, China.

DURING the process of preparing a tooth for filling, a dentist used in the ordinary way sulphate of atropia. A piece of cotton wool made moist by water, was dipped into a bottle containing the salt and inserted into the hollow of the tooth. The time of the sitting was 9 a.m. At eleven the patient, a man, æt. forty, became conscious of a dazed feeling. His skin was flushed, his pulse accelerated, and he felt slightly giddy, and unable to continue his office work. Dr. A. Cowie who first saw the patient obtained the history of the tooth being stopped, and although the symptoms of atropia poisoning were at first indefinite, wisely removed the stopping.

At 1 p.m., when I first saw him, the symptoms were well marked, pupils decidedly dilated, face and skin generally flushed, pulse full and bounding, 120, restless, some incoherence. The patient had had one-eighth grain of morphia hypodermically at 12 noon, and a mixture containing strychnia and potash.

At 2 p.m. the symptoms were advanced ; pupils one-third dilated, flushing of the face more decided, pulse 150, patient very restless, considerable incoherence ; inability to pass water although he had passed none since 8 a.m. ; dryness of the throat ; temp., 99°3 ; breathing, 30.

At 3 p.m. the symptoms were pronounced. He talked in a rambling way of matters connected with his business. To be still seemed impossible, and he was in a great state of mental alarm that he was developing paralysis. The pulse rose to 160 whilst lying down, breathing, 32 ; the patient complained of a thickness of speech, inability to articulate properly owing to dryness of the throat, and a feeling as if the root of his tongue were swollen. One-sixth of a grain of morphia was injected hypodermically, and a dose of the mixture above mentioned administered. He made one or two ineffectual attempts to pass water, complained of thirst, and although he sipped soda water occasionally he did not wish for much fluid.

At 3.10 he became drowsy and slept for about twenty minutes.

At 3.30 the patient awoke on being talked to. His face had become paler. Pulse 160, smaller and harder. Temp. 99°7, breathing 35. He was content to lie quiet. He passed 1½ oz. urine for the first time in a dribble, and complained of inability to micturate with sufficient force.

At 4 p.m. passed 2 oz. of urine with the same signs and symptoms as previously recorded.

5 p.m.—During the past hour he had passed 6 oz. of urine. He was more collected at times, but occasionally rambled off in his talk to matters which interested him years before. Pulse 160, breathing 30, temp. 100. Dryness in the throat still complained of.

6 p.m.—The past hour was spent in dozing for ten minutes at a time. He discussed in a dreamy way the probability of the tooth stopping being the cause of his illness. Passed 5 oz. urine. Pulse 130, breathing 24, temp. 100°2.

At 7 p.m. the patient had recovered his senses and talked rationally. He walked about, wanted food, and discussed his illness as a thing of the past. Pulse 120, temp. 100. Pupils dilated, but as it became dark his vision did not annoy him.

At 7.30 the pulse had fallen to 105, temp. 99°4, and in all, he had passed during the afternoon 21 oz. of urine.

The urine was hazy from phosphates, pale, sp. gr. 1008, no albumen. The amount of urea as gauged by the ureometer showed 5·013 grs. of urea to the fluid ounce.

The subsequent history is, that the patient ate a hearty dinner, slept well, and when seen next day had completely recovered from all traces of atropia poisoning.

It is impossible to be sure of the exact quantity of sulphate of atropia used, but a similarly prepared piece of cotton wool dipped in the salts and weighed carefully in a chemical balance, turned the scale at one-tenth of a grain.

The gum was excoriated, and had been bleeding slightly before the application, and there is no doubt that the symptoms were caused by a solution of the salt in the exuded blood obtaining direct entrance to the circulation.

The case is a warning to dentists, in the use of sulphate of atropia for stopping teeth.—*Medical Press.*

### Action against a Dentist.

AT the Liverpool County Court, on the 6th inst., before his Honour Judge Collier and a jury, an action was brought by Mr. George Wright, a clerk, residing in Dean Road, Liverpool, against Mr. William Henry Cole, dentist, of Bootle, to recover damages for the loss of a tooth. Mr. Rudd appeared for the plaintiff, and Dr. O'Feely (instructed by Mr. H. F. Neale) appeared for the defendant. The plaintiff's case was that, having previously on several occasions visited the defendant for professional services, he did so again on the 31st May, for the purpose of having a wisdom tooth examined, the tooth having caused him some trouble. The defendant examined the tooth, and advised its extraction, mentioning, however, that it was likely to break in the course of the operation. The plaintiff decided to have the tooth taken out. The plaintiff sat down in the chair, and the defendant with his forceps took out a tooth. The plaintiff supposing something was wrong, and that more had come away than should have done, asked the defendant if he had taken out the wrong tooth. The defendant asked him to sit still, and again putting the forceps into his mouth took out a portion of the wisdom tooth. The plaintiff not being satisfied, again asked if the wrong tooth had not been extracted. The defendant made some reply, and then pressed something into the plaintiff's jaw, which caused him great pain. The plaintiff soon afterwards put his fingers into his mouth, and drew out a sound molar tooth, next to the wisdom tooth, which had evidently been extracted by mistake. The plaintiff asked what defendant meant by pulling out the wrong tooth, and the defendant replied that it was sometimes possible to replant a tooth. The plaintiff, who admitted being somewhat excited, asked the defendant if he expected to be paid for such work; to which the defendant replied that he thought not under the circumstances. The plaintiff remarked that he would not have lost the tooth for £50. Shortly afterwards he left the house. The tooth accidentally removed was what was known as a twelve-year molar, and was particularly valuable. The plaintiff, having given evidence in support of the opening, was cross-examined by Dr. O'Feely, and denied being particularly nervous before the operation. Dr. O'Feely, in opening the defendant's case, said the two points for consideration were whether the operation was conducted with professional skill and reasonable carefulness. The defendant was then examined, and agreed that the molar had been extracted by accident, and that, without informing the patient of the accident, he had endeavoured to replant the tooth; but he explained to the court by means of a model that, owing to the particular formation of the plaintiff's teeth, the accident was one that might easily happen, especially if the patient happened to move his head, as the plaintiff in this case did. The wisdom tooth was much decayed, and far back in the head, and was covered to a great extent by the molar; and after gripping the wisdom tooth with the forceps, the movement of the plaintiff's head caused the forceps to slip and grip the sound tooth, which was taken out. He denied any negligence, and alleged that accidents of the kind were occasionally encountered. Mr. Pidgeon, of Oriol Road, Bootle, dentist, was called by the defence to give technical evidence. He said he would be extremely surprised if there was a practitioner in the land who had not in his experience had a

mishap of the kind, and this without any negligence or lack of skill. He considered the defendant's relation of the facts to be quite reasonable. In the course of the case it was mentioned that the defendant had had great hospital experience, and had taken out something like 5,000 teeth annually for the past few years. The jury found for the plaintiff, damages £5.—*Liverpool Daily Post*.

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### Dangerous Admixtures with Nitrous Oxide.

SINCE the first introduction of nitrous oxide gas as an anæsthetic there has been a tendency among certain persons to "improve upon nature." For many minor operations, and notably for dental purposes, the use of the pure gas has many patent advantages, among which not the least are its comparative freedom from risk when given in appropriate cases and by persons versed in its use, and also the rapidity with which the patient resumes consciousness after the inhalation has ceased. Possibly some will urge that the transient character of its influence possesses as many drawbacks as good points, but this view can hardly be accepted, for the period of anæsthesia is easily and successfully prolonged when a few inhalations of ether are permitted to follow the use of laughing gas. It is often overlooked that, as was pointed out years ago, ether possesses two stages of workable anæsthesia—one after only a few deep inspirations have been taken, when presumably the residual air of the lungs is saturated with ether vapour; and the usual later or profound stage of narcotism habitually employed for surgical operations. The first stage suffices for minor operations, and is pre-eminently of service consecutively to the inhalation of nitrous oxide gas. When properly managed, this degree of etherisation is seldom associated with vertigo, nausea, or headache. Other and less valuable means have, however, been resorted to for the purpose of prolonging nitrous oxide anæsthesia, and certain persons have advertised so-called "specifics" under the titles of "vitalised air" and the "vegetable anæsthetic vapour," which appear in some cases to consist of nitrous oxide gas more or less impregnated with chloroform. Whatever may be alleged as to the value of chloroform combined with laughing gas, it cannot be too strongly insisted upon that persons asking for "gas" should be guarded from the use of chloroform, and when that agent is employed it should only be with the patient's knowledge and consent. A correspondent draws attention to the death of a weakly young man from syncope which occurred during the administration of what was termed "gas," but which seems, according to the testimony of the purveyor of the material, "not to have been pure gas." Unfortunately, the Parisian authorities did not, if we can rely upon the account before us, insist upon a post-mortem examination or an analysis of the anæsthetic employed. The record of so many hundreds of thousands of administrations without casualties requires us to scrutinise very closely alleged deaths under nitrous oxide, but a fatality such as the one which we quote should impress upon all who use nitrous oxide the obligation to see that the gas is itself pure; and further, that no dangerous admixture be used until at least the safer and more commonly accepted methods have been employed and have failed.—*The Lancet*.

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### Lozenges for Dryness of the Throat and Mouth.

I HAVE used with much satisfaction for the relief of the uncomfortable sensations of heat and dryness which characterize many acute and chronic affections of the mucous membrane of the mouth and throat, a lozenge made according to the following formula :—

Fluid extract of pyrethrum	...	...	2-3 minim.
Pilocarpine hydrochlorate	...	...	$\frac{1}{4}$ grain.
Pure extract of licorice	...	...	2 grains.
Powdered acacia	...	...	2 "
Glycerin	...	...	1 minim.
Sugar, enough to make	...	...	20 grains.

The lozenge is allowed to dissolve in the mouth, and one is used every two, three, or four hours, as may be indicated. Should more frequent use be necessary the quantity of pilocarpine should be reduced. The addition of two grains of ammonium chloride will often be beneficial in subacute inflammatory condition of the mucous lining of the respiratory tract; while in more chronic affections, two or three minims of the oleoresin of cubebs will serve a good purpose. The lozenge has a pleasant pungency, and its effect in keeping the parts well moistened is quite marked.—Dr. S. SOLIS-COHEN, *Med. News*.

### Immediate Torsion of Teeth.

We copy the following as of special interest to our readers.

*To the Editors of THE LANCET.*

SIRS,—The above operation was performed on me about thirty-two years ago by the late Frank L'Estrange of Dublin. The tooth in my case was the left central incisor, and the operation was performed at one sitting. As I did not get anything to relieve the pain, I may say that all the details of the operation were forcibly impressed on my mind. After the torsion was effected, the tooth was kept in position by either silk or wire wound round it and round those on each side, and the rest of the treatment consisted in applying lint soaked in a lotion containing laudanum and tincture of myrrh to the gum. At the end of about a month the tooth was as firm as any of the others, and has remained so ever since. My impression is that Mr. L'Estrange tried immediate torsion then, as an experiment, in preference to taking out the tooth and replacing it. The amount of force necessary was, I remember, very great, even in the hands of such a strong man and skilful operator.—I am, Sirs, yours truly,

GEORGE H. ORMSBY, M.K.Q.C.P.I., &c.

Slaidburn, March 3rd, 1890.—*The Lancet*.

### Hypnotism as an Anæsthetic.

A CASE in which a surgical operation was performed painlessly during hypnotic sleep (induced by M. Bernheim, of Nancy) is related in the *Revue Médicale de l'Est*, March 15th. The patient was a girl, aged 21, who was suffering from psoas abscess. On December

20th, 1889, she was taken to the operating theatre, and M. Bernheim said: "She will fall asleep, and will not feel any pain." She went to sleep there and then, and an incision seven centimètres in length was made by M. Heydenreich, the patient meanwhile singing in obedience to an order from M. Bernheim. The abscess cavity, which was nine centimètres in depth, was thoroughly scraped out, the whole operation lasting sixteen minutes. In reply to questions the next day, the girl said she remembered nothing of what had taken place, and was surprised to see the wound in her thigh when the dressing was changed. With reference to the possibility of hypnotism replacing chloroform or ether as an anæsthetic, M. Bernheim's remarks are worth quoting. He says: "Hypnotic sleep could hardly replace chloroform anæsthesia for an operation occupying any great length of time, because the surgeon is exposed to the danger of seeing his patient awake by auto-suggestion at the very moment when such an occurrence is least desirable."—*British Medical Journal*.

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### Death from Swallowing a False Tooth.

MR. CARTTAR held an inquest on July 19th, at the Greenwich Workhouse, on the body of Amelia Healey, aged sixty, a widow, of 107, South Street, Greenwich. Evidence was given to the effect that the deceased being insane, had been removed to the workhouse pending her transfer to an asylum. At the workhouse she was very excited, and manifested a suicidal tendency. It was not known that she had false teeth, but she stated she had swallowed one. Dr. Dixon, assistant medical officer at the mortuary, said deceased wanted a knife and scissors, and attempted to cut her throat with a comb. Witness and other medical men tried to extract the deceased's tooth, which she said she had swallowed, and neither of them could detect its presence. He had some doubt at first about her having swallowed it. He had made a *post-mortem* examination, and found the gullet inflamed and in it a platinum plate, with three hooks and a tooth, embedded in the side. An abscess had formed round it. It took quite ten minutes to cut out the plate, which was about three and a half inches from the stomach. The cause of death was exhaustion from abscess, caused by the presence of the plate, and was accelerated by heart disease. Deceased told him that she swallowed the plate intentionally. The jury returned a verdict of "Death from abscess in the œsophagus, caused by accidentally swallowing a platinum plate, at the time being a lunatic."—*South Eastern Herald*.

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### Case of Adhesion of the Soft Palate to the Pharynx, the Result of Syphilis.

AT the meeting of the Harveian Society of London last month, Mr. J. Ernest Lane showed a case in which complete adhesion had taken place between the free border of the velum palati and the posterior wall of the pharynx, so that the nasal and oval cavities were separated from one another posteriorly—a small aperture at the junction of the hard and soft palate being the only means of communication between

the two. The cause of this deformity was a diffused syphilitic infiltration of the soft palate and of the pharyngeal wall; to this succeeded ulceration of the parts involved, and adhesion between the posterior pillars of the fauces and the wall of the pharynx, which adhesion gradually advanced inwards towards the middle line—the infiltrated tissue becoming subsequently converted into a tough, highly contractile cicatrix. Mr. Lane described this condition as one of considerable rarity, though the partial adhesions were not uncommon. Loss of taste and smell usually resulted, to remedy which some operative measure might be deemed advisable; in this case the inconvenience was not sufficient to justify surgical interference at present. Mr. Lane showed portions of the vomer and inferior turbinated bones which had been exfoliated from the case.—*The Medical Press.*

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### Case of Hare-lip.

At the same meeting Mr. Edmund Owen also showed a case of hare-lip with cleft palate. The hare-lip had been caused by a plastic operation, but the pins had been left in too long, so that unsightly scars were produced. Mr. Owen said that, though he had not performed the operation himself, it served once more to illustrate the disastrous results of such methods of obtaining the good apposition of cut surfaces. For his own part, he had entirely discarded hare-lip pins and obtained excellent results from the use of carefully inserted sutures.—*The Medical Press.*

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### Fibro-cartilaginous Tumour.

At a recent meeting of the Clinical Society of London (May 20th), Mr. James Berry showed a fibro-cartilaginous tumour which he had removed from the tongue of a man aged forty-nine. It had been growing slowly for five years. It was situated on the right border of the tongue, about half way between the base and the tip. It had attained the size of a small hazel nut; it projected markedly from the tongue, to which it was attached by a slightly constricted base. On the surface it was smooth and covered by mucous membrane, which moved freely upon it. On section it was found to consist mainly of firm fibrous tissue with a nodule of cartilage in the centre. Mr. Berry said that the chief interest of the specimen lay in its rarity—fibro-cartilaginous tumours being very seldom found in this region. He had not been able to find any mention of a similar specimen in the Transactions of the Society. A few somewhat similar cases had been recorded by Weber, Bastian, and others; but in most of them the patient was much younger, and the tumour probably congenital. This was certainly not the case with the specimen exhibited.—*The Lancet.*

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### Death under Chloroform.

THE death of a man named Evans, aged 39, a commercial traveller, whilst under the influence of chloroform, was the subject of an inquest held on March 22nd at the Swansea Hospital. Dr. Horatio Rawlings,

resident surgeon, is reported to have stated that two months ago the deceased underwent an operation at the hospital for lupus, he administering the anæsthetic ; the operation was completely successful. On the occasion of the further operation he (Dr. Rawlings) administered a mixture of alcohol, chloroform, and ether, knowing deceased to have been a heavy drinker. Deceased did not bear this well, struggling violently, and subsequently some chloroform was administered by Dr. Jabez Thomas (who performed the operation). Very shortly after his breathing ceased. Artificial respiration was resorted to, and other attempts at resuscitation made, without result. Dr. J. Kynaston Couch, who made a *post-mortem* examination, attributed death to asphyxia. The jury found that deceased died from asphyxia, caused by the administration of an anæsthetic at his own request, and that no blame attached to any one.—*British Medical Journal*.

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### Chewing Gum.

MR. H. C. YATES, coroner for Cheshire, who recently forwarded to the Local Government Board the recommendation of a jury at Congleton that a substance called chewing gum should be included under the Food and Drugs Act, has received the following letter from the Assistant-Secretary of the Local Government Board :—"Sir,—I am directed by the Local Government Board to inform you that your letter of the 14th ult., in reference to the case of a child whose death was caused by eating chewing gum, has been forwarded by them to the Secretary of State for the Home Department, and I am to state that the Board have had under their consideration the recommendation of the jury at the inquest ; but they are of opinion that chewing gum is not a substance which could properly be brought within the scope of the Sale of Food and Drugs Act, as it does not appear to be sold for food, and, moreover, no question of its adulteration arises."—*Chemist and Druggist*.

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### Coffee in Opium Poisoning.

THE value of coffee in aiding the removal of opium from the stomach is well shown by the case of attempted suicide, reported by Dr. G. C. Maclean in the *Boston Medical and Surgical Journal*. One and a-half ounces of laudanum had been swallowed, and the patient, when seen about three hours later, was completely comatose, pupils contracted to pin-holes, breathing stertorous, face dusky, limbs cold, &c. The stomach was washed out by aid of the pump until the returning water was clear and inodorous, and then a bowl of strong hot coffee was injected. On reversing the pump and withdrawing a portion of this fluid Dr. Maclean found it to be smelling strongly of laudanum, and taking the hint the stomach was now well washed out with coffee at intervals until the odour of the poison could no longer be detected. The cold douche, flagellation, and hypodermics of atropine, were resorted to, but as the breathing grew worse, artificial respiration was practised, the patient ultimately recovering.—*Medical Press*.

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### Prevention of Attacks of Migraine.

DR. HAMMERSCHLAG, according to the *Allgemeine Medical Central Zeitung*, No. 39, employs the following combination of remedies for the prevention of attacks of migraine, and states that hitherto it has not failed him :

Caffeinnæ citrat ...	...	...	...	...	gr. xv.
Phenacetin ...	...	...	...	...	gr. xxx.
Sacch. albi ...	...	...	...	...	gr. xv.—M.

Fiat pulv. Div. in capsulæ No. X.

Sig : One capsule to be taken, in the intervals of the attacks every two or three hours.

Phenacetin, he says, does not act so promptly when given alone. This treatment may be kept up until a decided remission occurs.—*The Therapeutic Analyst*.

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### Soluble "Sanitas" Oil.

THIS is a new preparation which the Sanitas Company (Limited) have just brought out. They tell us that it is practically non-inflammable, and we find that when added to water in any proportion, a perfect emulsion is formed. As the preparation is possessed of undoubted antiseptic power and is a powerful deodorant, it is an article which can be put forward with confidence at this house cleaning season. We notice from the various enclosures which we receive with this company's letters, that they have lately developed strongly in the artistic literature line.—*Chemist and Druggist*.

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### OBITUARY.

It is with deep regret we have to announce the sad death by drowning of Mr. A. C. Day, a promising student of the Dental Hospital of London, which took place on August 12th. We are only in possession of the bare facts, which are as follows:—Day was crossing with two sisters from Coombe Martin, on the North Coast of Devon, to view some caves, when a squall caught and capsized the boat. The whole of the occupants, five in number, were drowned ; none of the bodies have yet been recovered.

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### ANNOTATIONS.

WE have received for inspection a bottle of Bromidia, and we think it may be found to produce rather more satisfactory results than chloral in cases where the latter is indicated. The preparation consists of German chloral, bromide of potassium, hyoscyamus and cannabis indica, and these drugs in combination seem to act well.

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THE following is recommended by a contemporary as useful for toothache, and considering the merits of the drugs it contains it might prove of service in cases of pain due to exposed or irritated nerves. Possibly the substitution of an essential oil for the glycerine would increase the value of the prescription:—*Acidi carbolici*, gr. v.; *cocaine hydrochlor.*, grs. xv.; *menthol*, gr. iij.; *glycerine*, ʒss. M. Sig. Place a small amount in the cavity.

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THE USE OF WATER AT MEALS.—Opinions seem to differ as to the effect of free ingestion of water at meal times. Many assert that it dilutes the gastric juice and so retards digestion; others, however, maintain that, even if it does dilute the gastric juice, it is not necessarily a drawback, for moderate delay in the process is if anything advantageous. Still further, we find that pepsin is a catalytic body, a given quantity working for an indefinite period, providing the peptones are removed as they are formed; this the free ingestion of water accomplishes. Water drunk before meal times undoubtedly assists digestion by clearing away any mucus secreted by the mucous membrane during the intervals of repose and favouring peristalsis of the alimentary tract. This is especially the case in the morning, the gastric walls at this time being covered with a tenacious coating, and if food enters before this is cleared away digestion is retarded, since the mucus clings round the food, protecting it from the action of the gastric juice. A glass of cold water drunk directly after rising is one of the greatest helps to a healthy digestion.

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At another place (page 501) we quote an interesting account of poisoning by sulphate of atropia used during the operation of filling a tooth. The case was under the care of Mr. James Cantlie, who will be readily recollected by many readers as the former popular Demonstrator of Anatomy at Charing Cross Hospital.

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In a book written towards the end of the last century a French traveller, one Faujas de St. Fond (*"Voyage Ecossais"*), wrote down his impressions of many things which he saw in a gossippy and often very entertaining manner, so that, though geology was the motive and Staffa the goal of his journey, many scraps of odd-and-end information are to be found in his pages. Twice in the book there occur remarks to the effect that, although the women

of Glasgow and other northern towns go about bare-headed and often barefoot also, nevertheless they do not appear to lose their teeth. Perhaps some of our readers may be able to throw some light upon the nature of the superstition which prompted the remark; doubtless it was, judging from the matter-of-course way in which he speaks of it, some belief then well enough known to everybody, though now forgotten.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

### The Association and its Branches.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Although it is very easy to recognise the force of the facts brought forward by Mr. Charles Tomes in his remarks on Mr. Quinby's address at Derby, I cannot help feeling that they are very misleading, and not strictly accurate. It is, however, not my intention either to defend Mr. Quinby or to repudiate his remarks, but I think that he stated a real difficulty, and one which there is plenty of evidence to show is felt by most, if not all, of the Branches. I think it was hardly fair of Mr. Tomes to attack a weak point and completely ignore the real point at issue.

In a comparatively young and rapidly increasing Association, there may be many things which are not perfect without anyone being to blame, and it is only by calling attention to these things that they can be remedied, I certainly think that Mr. Quinby rather understated than exaggerated the difficulty. For instance, the representatives have practically no influence over the Committee of which Mr. Tomes is chairman. It is never re-elected and consists of a few men of strong views and common interests, some of whom would probably resign if any attempt were made to curtail their prerogative. It is not long since they published a pamphlet in very questionable taste without ever bringing it before the Board for approval.

Now every one must recognise what a power such a Committee as this may exert. Again, if Mr. Tomes enquires into the relation of the voluntary officers to the committees he will, I think, have no difficulty in discovering that they are closely bound up with them and have almost unlimited influence. I am satisfied from experience both on the Representative Board and Business Committee that they are practically predominant.

I do not wish it to be presumed that I intend to cast any reflection, personally, on our voluntary officers; the self-sacrifice they have

made, the work they have done, and the success which has attended their efforts would dispel any such insinuation were it suggested.

What I do feel, however, is that it is not fair to expect, nor at all necessary, that a comparatively large and wealthy Association, such as ours has become, should be dependent upon voluntary workers, and I think all will agree that it will, in the near future, be impossible to find capable men willing to devote the necessary time and energy to carry on the ever-increasing work.

What I believe to be the only way out of the difficulty, and what I now wish to urge, is the appointment of a responsible editor, and a paid organising secretary in place of the hon. secretary, who would be able to devote the necessary time to the work, and be able to relieve the Branch secretaries of much of the work which now falls upon them and which they are expected to do. A London Branch might then be formed, and the Association would become a confederation of the Branches, and all excuse for friction between the London and Branch representatives be entirely removed. This would be much more satisfactory and practicable than returning part of the subscriptions or paying the expenses incurred by Branches out of the central fund. The Branches would still carry on their local self-government without interference from the Central Board, and at comparatively small cost.

Yours faithfully,

*York, August 1st, 1890.*

THOS. EDWARD KING.

## APPOINTMENTS.

ERNEST H. L. BRIAULT, L.D.S.Eng., has been appointed House Surgeon to the Dental Hospital of London.

HERBERT R. BOWTELL, L.D.S.Eng., and W. MAY have been appointed Assistant House Surgeons to the Dental Hospital of London.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.



**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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**Retrospect.**

It's easy to be wise after the event, and in this respect at least, the editorial notice of the Annual Meeting in our September number is easier to compile than the semi-prophetic one of August. It is not, however, *always* a pleasanter task, for while in August we are entitled to anticipate the best that can possibly happen, in September we cannot romance, we must deal not with suppositions but with facts, and record them whether satisfactory or otherwise. This year the difficulties that usually beset the writer of the article have been reduced to a minimum. We do not think that anyone who was present will be inclined to dispute the statement that one of the chief characteristics of our Exeter meeting was the atmosphere of cordiality and forbearance that pervaded all the pro-

ceedings, and was specially conspicuous in discussions of a delicate nature that might not unreasonably have been expected to produce a certain amount of friction.

The social feature of the meeting that is most likely to survive in the memories of those who were present was the presentation of the portrait of Mr. Turner to the Association, and of a replica to Mr. Turner's wife and family. We will not here dwell upon the services that have evoked this expression of feeling on the part of Mr. Turner's professional brethren. Suffice it to say that it will probably be many years before the Association can find another such servant on whom to lavish its enthusiasm and gratitude. None of us who were present are likely to forget the occasion, but Mr. Turner's intimate connection with the management of the Journal renders us unwilling even in his absence to say more on this subject, tempting though the opportunity may seem.

The resignations which accompanied that of Mr. Turner were of no small moment to the Association. Mr. Weiss, whose services to dental reform were being rendered when many of us were not born, ceases to fill the post of vice-president of the Representative Board, and is succeeded by our popular Scottish *confrère*, Mr. Bowman Macleod. Mr. Morton Smale relinquishes after many years of self-sacrificing labour the onerous post of hon. secretary to the Association. Mr. Smale's health was certainly not equal to a long continuance of the harassing anxiety attendant upon this most thankless office; however he will leave behind him traditions of genuineness and singleness of purpose, and we trust he will find an able successor in Mr. Paterson. The loss of Mr. Canton as a financier is a very serious one, but our regret is tempered by the feeling that neither in his case nor in those of the other retiring officers do we lose the benefit of their advice

and assistance—indeed Mr. Canton remains still an office-bearer as President of the Representative Board, where he succeeds Mr. Turner. The office of treasurer has fallen to the lot of Mr. Woodruff who, we entertain no doubt, will discharge his duties to the satisfaction of the Association, and who will, we hope, differ from his predecessors in one respect at least, namely, that of having large annual surpluses to deal with.

Turning to the business programme, we think nobody will deny that the first place in interest belongs to Mr. George Campion and his paper on a Higher Qualification in Dental Surgery, and the noteworthy discussion which followed it. As a growing Association, we are justly proud of the paper and the talents, both as an author and as a debater, displayed therein by one of our younger members. The discussion, which was opened with great ability by Mr. Smale, maintained throughout a high level of excellence, and though exhibiting the widest differences of opinion upon important and delicate topics, was conducted throughout with the utmost good humour and fairness. It is not for us to pronounce upon the merits of the question, our readers must form their own conclusions after perusing the report of the meeting. This much, however, we may say, that the majority of the speakers differed considerably from the views advocated by Mr. Campion. Mr. Campion replied at some length, but it was obviously impossible to deal at a moment's notice, and in the brief space of time at his disposal, with the exhaustive criticism which his paper elicited.

The practical demonstrations were specially interesting, the all-important subject of anæsthetics once more receiving a large share of the attention of the meeting.

After each day's work the members were afforded an opportunity for pleasant relaxation in a commodious smoking-room, which was set apart for their use in the

Rougemont Hotel. The facility which this arrangement afforded for a quiet chat was not neglected and while recognizing to the full what may be considered the sterner functions of an annual meeting, it would be foolish to underrate the excellent results which accrue from these lighter sort of gatherings, after professional and social duties have been laid aside. A little informal conversation will often smooth away differences and difficulties that correspondence only tends to exaggerate.

The unostentatious, but valuable services of the organizers of the various departments, among whom we cannot omit to mention Mr. Henry Mason, Mr. Hunt, of Yeovil, and Mr. Ackland, acting so admirably in concert under the *ægis* of our genial President, Mr. Browne-Mason (who seems, by the way, to possess the secret of infecting all who surround him with a dash of his own *bonhomie*), bore their fruit in a most interesting meeting, which was thoroughly and generally appreciated. It is impossible to notice in a leading article all the features of interest attending an Annual Meeting, we will therefore take leave of the subject by commending the report on Page 522 to the attention of every one of our readers. One word in conclusion is due to the local friends, lay and professional, outside the limits of the Association, who went so far out of their way to make our visit to Exeter the success it proved. Every year we feel that we are gaining ground with the large majority of the outside public, who are converted from indifference to an active sympathy with our aims and objects, when they meet us and help to entertain and are entertained by us at our annual meetings. Such public recognition will probably bear fruit presently in a better appreciation of dental surgery among the public at large, and will prove not the least of the material advantages arising from our annual meetings.

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## ASSOCIATION INTELLIGENCE.

**Annual Meeting of the Western Counties Branch.**

THE annual meeting of this Branch was held at the Rougemont Hotel, Exeter, on Wednesday, August 20th. The Council of the Branch met at five o'clock, and at six o'clock the Annual General Meeting of the members, for business only, took place. Mr. J. C. Oliver (Cardiff), President, took the chair, and there were also present Messrs. J. T. Browne-Mason (Exeter), President-elect; W. A. Hunt (Yeovil); G. C. McAdam (Hereford); E. Apperly (Stroud), J. M. Ackland (Exeter), E. L. Dudley (Bath), C. Williams (Leamington), C. H. Riches (Cardiff), J. J. H. Sanders (Barnstaple), C. A. Hayman (Clifton), A. Kendrick (Taunton), and H. B. Mason (Exeter), Hon. Sec.

The HON. SECRETARY reported that the Council had elected the following as members of the Association and Branch:—Mr. E. Brown (Barnstaple), Mr. H. J. Holden (Exeter), and Mr. A. D. Horn (Newton Abbot).

The report of the Council was next read by the HON. SECRETARY. The Council stated that they had much pleasure in presenting their report to the annual meeting of members. Last year's meeting at Cardiff was the first held in the Welsh portion of the Branch. It was well attended, and had resulted in a considerable increase in the number of members, a result largely due to the President (Mr. Oliver), to whom also the Branch was indebted for much of the success of the meeting. The President's address, and the papers and discussions following it, were of a very interesting character. Papers and demonstrations were contributed by Drs. Vachell and Walker, and Messrs. Oliver, Browne-Mason, Gartrell, H. Rose, and White. The April meeting of the Council was held at Bristol, and was followed, in accordance with the resolution mentioned in last year's report, by the first informal meeting of members. The Council regretted that, as regarded attendance, the new departure could scarcely be deemed successful, as only six members in addition to those attending the Council thought fit, in spite of the central situation of the meeting-place, to put in an appearance. The Council remarked that such a result was in the highest degree discouraging, and they expressed the hope that in future members would endeavour to be present in larger numbers. They felt sure it

would be for the benefit of the Association, and add very much to the pleasure of the meetings. The Council went on to report that the invitation issued by them in the name of the Branch to the Central Association to hold their meeting this year in Exeter, was unanimously accepted, and in consequence, they had decided this year only to hold a business meeting of the Branch. The Council had every reason to anticipate a most successful meeting under Mr. Browne-Mason's presidency. They hoped members of the Branch would do their utmost to give the Association a hearty welcome. The Council regretted to again have to announce the loss by death of one of the most prominent members of the Branch, Mr. C. Spence Bate, F.R.S., a gentleman equally distinguished in the professional and scientific worlds. The existence of the Branch was largely due to his initiative. It was established as an independent association at a meeting held in his house at Plymouth, in April, 1879, the first general meeting being held at Exeter in August of that year under his presidency. The Council had also to regret the loss of another past President, Mr. George Parkinson, of Bath, at which city he presided over the meeting held in 1880. Mr. Parkinson had ceased to be a member for some time before his death, but as a worthy bearer of a name honourably distinguished in the profession, and as a useful and esteemed former member of the Branch, the Council felt they were but expressing the universal feeling of regret amongst the members at his loss. Proceeding, the Council stated that the number of members now was eighty-five compared with eighty-seven at the last meeting. The financial condition of the Branch was satisfactory; £10 was voted by the special meeting of members at Bristol as a contribution to the fund being raised wherewith to give the Association a suitable reception. The Council suggested the holding of next year's meeting at Bath, and they nominated Mr. E. L. Dudley as President-elect.

The HON. TREASURER (Mr. J. T. Browne-Mason) presented his report, which showed that the total receipts for the year amounted to £21 9s. 8d., made up by a balance in hand of £4 9s. 8d. from the previous year and subscriptions to the sum of £17. The expenses incurred during the year were:—Cardiff meeting, £8 3s.; printing and stamps, £4 4s. 1d.; Council meeting at Bristol (April 19th), £1 1s.; total, £13 8s. 1d.; leaving a balance in hand of £8 1s. 7d. The accounts were audited by Messrs. Hayman and Williams and found to be correct.

Mr. E. APPERLY moved and Mr. G. C. MCADAM seconded the adoption of the report of the Council and of the Treasurer.

The motion was agreed to.

The meeting then proceeded to the election of three members to fill vacancies in the Council caused by the decease of Mr. Spence Bate and the retirement of Mr. C. A. Hayman (Bristol) and Mr. H. Mallet (Exeter). The Council recommended the appointment of Mr. J. H. Sanders (Barnstaple), Mr. J. H. Gartrell (Penzance), and Mr. E. Goodman (Taunton).

The recommendation of the Council was unanimously agreed to.

Mr. J. C. OLIVER said, that in vacating the position of President of the Branch, which he had held for the last twelve months, he should like to express his thanks for the support he had received on all hands. It had given him a great deal of pleasure to be interested in any movement for the advancement of dental surgery. He was pleased to think that these meetings did accomplish very much, not only in the interests of the profession, but, what was of greater importance, in the interests of the public. So far, he was very much gratified in having been connected with it, and especially as he had been in such an honourable position as the Branch had put him in, and for which he thanked them. Mr. Oliver concluded by saying that he had much pleasure in vacating the presidential chair in favour of his worthy friend, Mr. J. T. Browne-Mason.

Mr. Oliver then left the chair, which was taken by Mr. Browne-Mason amid applause.

The new PRESIDENT said: Your chairman on this occasion reserves his presidential address until to-morrow.

Mr. E. L. DUDLEY said he had much pleasure in proposing, "That the best thanks of this meeting be given to Mr. Oliver for his services as President during the past year."

Mr. J. H. SANDERS seconded the resolution.

The PRESIDENT, in supporting the resolution, said the Cardiff meeting of the Branch was a very successful one, and especially successful owing to the exertions of Mr. Oliver. Nothing was wanting on his part to ensure the success of the Cardiff meeting, and he worked extremely hard on that occasion.

The resolution having been carried by acclamation,

Mr. OLIVER thanked the meeting heartily for the kind sentiments they had just expressed. Nothing rewarded work so much as approval of the work done.

With regard to the nomination of members to serve on the Representative Board of the Association, the HON. SECRETARY stated that the members were nominated by the branches ; but the general body of the Association elected them. The members of the Western Branch on the Board were :—Mr. T. Cooke Parson (Clifton), Mr. W. A. Hunt (Yeovil), Mr. E. L. Dudley (Bath), and the *ex-officio* members, the President and Hon. Secretary for the time being.

Mr. Oliver and Mr. Ackland were selected for nomination.

#### PRESENTATION TO THE HONORARY SECRETARY.

Mr. W. A. HUNT said there was a duty devolving upon him, and he never in his life had had to discharge a pleasanter duty. Many of those connected with the Branch were well aware of the excellent services rendered by Mr. Henry Biging Mason. For seven or eight years Mr. Mason had rendered indefatigable services as Hon. Secretary of the Branch. Recent members little knew how much they were indebted to Mr. Mason for his work. It had, he knew, been a work and labour of love on Mr. Mason's part, but it had been right loyally done, and many of the members felt the time had arrived when they should make some little acknowledgment to Mr. Mason to show him that they appreciated his services. Acting on the initiative of Mr. Apperly, of Stroud, the members had prepared an address with the names of subscribers and a salad bowl, of both of which he begged Mr. Mason's acceptance on behalf of the Branch. Moreover, in the bowl Mr. Mason would find a purse containing some money, of which he also asked Mr. Mason's acceptance, in recognition of the services he had rendered to the Branch as Honorary Secretary.

The address, which was prettily illuminated, was read by Mr. Hunt, as follows :—“The members of the Western Counties Branch of the British Dental Association whose names terminate this address, hereby desire to record their appreciation of the valuable services rendered, ‘all for love and nothing for reward,’ by Henry Biging Mason, Esq., as their Secretary since the year 1883 ; and they beg him to accept the accompanying bowl and purse as tokens of their good wishes to him for his present and his future.”

The bowl was of solid silver with a black pedestal, which latter bore the following inscription :—“Presented to Henry Biging Mason, Esq., by the members of the Western Branch of the British Dental Association, in recognition of his great services to



them as their Honorary Secretary since 1883. August, 1890." There were over fifty subscribers.

Mr. MASON, who was cordially received, in replying, said he thanked the members very sincerely and heartily for the great compliment which they had paid him. It had been a great pleasure to him to perform the duties of Honorary Secretary to the Branch, and he only regretted that he felt the time was coming when it would be necessary for him, in the interest of the Branch, to resign, and that a fresh Secretary should be found. He had for a long time regretted he was not able to devote the time to the duties of the office he should like to have done. With regard to the testimonial, he need hardly say that he accepted it with a great deal of pleasure. It had come upon him quite unexpectedly. He had, however, a feeling of delicacy in accepting a money gift from the members.

The PRESIDENT: It was only put in because we did not know what to give you.

Mr. MASON, continuing, said that if the money could be disposed of in any other way he should be glad, inasmuch as he had been an honorary officer of the Branch. While he appreciated the spirit in which the purse was presented to him, he did not think he could rightly accept it. (A MEMBER: Buy something for the future Mrs. Mason.) Although he might before long cease to be Secretary, he should never cease to take an interest in the welfare of the Branch. He had received the greatest possible kindness from every member since he had been Secretary, a period extending over seven years, and he did not think he had had a disagreeable word with a single member. He did not think there could be a council of any association which could work together more cordially than their own had done.

The PRESIDENT announced that in consequence of a recent domestic affliction the Mayoress would not be present with the Mayor at the reception which his Worship gave that evening to the members of the Association. The Mayor had taken the warmest interest in the visit of the Association; but his Worship felt that he could not be present himself at any of the subsequent festivities, but would be represented by his deputy, the ex-Mayor (Mr. Alderman Peters).

Mr. HUNT, before the close of the meeting, said the members were indebted to Mr. Apperly for not only taking the initiative in connection with the presentation to the Secretary, but also for carrying the work through to a successful end.

Mr. APPERLY said it had given him great pleasure to do the work.

The meeting then ended.

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### The Annual General Meeting, 1890.

THE proceedings in connection with the tenth Annual Meeting of the British Dental Association, held this year at Exeter, commenced on Wednesday, August 20th. The order of proceedings was drawn up and issued in a handy book form by the Committee of the Western Branch of the Association.

### THE MAYOR'S RECEPTION.

On the evening of Wednesday, the 20th, at 8.15 p.m. the reception by the Right Worshipful the Mayor (Mr. T. Snow), to welcome the members of the Association to the city, began. It was held in the Assembly Room at the Rougemont Hotel, which had been charmingly decorated by Mr. Hussey, the hotel manager. Invitations were issued to the members of the Association, as well as to representative men of the city and neighbourhood. The Mayor wore his chain of office, and gave a personal welcome to each guest. Among those who accepted the Mayor's invitation were the President of the British Dental Association (Mr. S. Lee Rymer), the President-elect (Mr. J. T. Browne-Mason), Dr. Elliott (London), Dr. and Mrs. Harvey (Plymouth), Mr. H. O., Mrs. and Miss Browne-Mason, Mr. E. M. Jamieson (Crediton), Mr. E. L. Dudley (Bath), Mr. C. Ware, Mr. Hubert Hamlin, Mr., Mrs. and Miss Andrew, Mr. and Mrs. Vlieland, Mr. and Mrs. A. Buckingham, Mr. J. Fenn Cole (Ipswich), Mr. H. L. Albert (London), Mr. and Mrs. A. Kendrick (Taunton), Mr. E. H. Shephard, Rev. J. and Mrs. Ingle, Mr. and Mrs. J. D. Harris, Mrs. Kindersley and party, Mr. and Mrs. Gratwicke, Mr. H. B. Varwell, Mr. W. Brown, Mr. J. T. Tucker, Mr. C. R. M. Clapp, Mr. and Mrs. R. Daw, Rev. W. and Mrs. Secretan, Mr. and Mrs. Hawkins, Mr., Mrs. and Mr. W. L. Jones, Mr. and Mrs. Mundell, Mr. and Mrs. C. Browne-Mason (Scarborough), Mr. and Mrs. J. M. Ackland, Mr. Frederick Canton (London), Miss Mommsen (Kingswear), Mr. Caleb Williams (Leamington), Mr., Mrs. and Miss Burch (Exmouth), Mr. J. I. Pengelley, Mr. R. P. Lennox

(Cambridge), Mr. and Mrs. Garland, Mr. W. Reginald Roberts (Lichfield), Mr. G. G. Campion (Manchester), Mr. Stocken (London), Mr. and Mrs. Turner (London), Mr. G. Henry (Hastings), Mr. Carlton H. Riches (Cardiff), Mr. S. Spokes (London), Mr. Mallet, Mr. Willey (Thornlea), Mr. T. E. King (York), Mr. A. Fothergill (Darlington), Mr. W. H. Ash (London), Mr. and Mrs. Seymour (Chichester), Mr. W. R. Ackland (Bristol), Mr. and Mrs. Brutton Ford, Mr. Holmes á Court (Clifton), Mrs. Fothergill (Darlington), Dr. and Miss Hunt (Yeovil), Mr. W. Burt, Mr. A. Jones (Cambridge), Mr. and Mrs. de Courcy Hamilton, Mr. G. D. Cann, Mr. H. D. Thomas (Starcross), Mr. W. Parsons, Mr. Charles E. Bell, Mr., Mrs. and Miss Harding, Mr. and Mrs. Arthur Roper, Mr. and Mrs. Pring, Mr. Glanville, Mr. and Mrs. W. Horton Ellis and the Misses Ellis, Mr. H. Wilcocks Hooper, Mr., Mrs. and the Misses Peters, Mr. and Mrs. Mackay (Twyford), Mr. Henry Mason and the Misses Mason, Mr. F. Petty (Reading), Mr. E. Apperly (Stroud), Mr. and Mrs. Alverstone Gabell (Red Hill), Mr. Oliver (Cardiff), Mr. Frederick Rose (Guernsey), Mr. W. Fryer Cornelius (Teignmouth), Mr. W. J. Goodman, Mr. Morgan Hughes (Croydon), Mr. D. Hepburn, Mr. A. Smith, Mr. A. Underwood (London), Mr. Donald Cameron (Exeter City Surveyor), Mr. Egan (Cork), Mr. H. V. Weisse (Rugby), Mr. Colwill (Ilfracombe), Mr. R. P. Morrison (Barnstaple), Mr. Minshall (Salford), Mr. Vanderpant (Kingston-on-Thames), Mr. E. Goodman (Taunton), Mr. E. E. Brand, Mr. S. G. Reeves (Dublin), Mr. and Mrs. Kirby (Bedford).

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*Thursday, August 21st.*

### Meeting of the Representative Board.

The Representative Board met on Thursday, August 21st, J. Smith Turner, Esq., in the chair. There were present Messrs. L. Matheson, W. H. Coffin, D. Hepburn, S. Spokes, W. H. Woodruff, Felix Weiss, F. Canton, and M. Smale, of London; Messrs. W. A. Hunt, Yeovil; E. Apperley, Stroud; G. Cunningham, R. P. Lennox, Cambridge; E. L. Dudley, Bath; W. E. Harding, of Shrewsbury; T. E. King, of York; J. C. Oliver, Cardiff; H. B. Mason, Exeter; Amos Kirby, Bedford; W. A. Rhodes, Cambridge; Rees Price, Glasgow; W. B. Bacon, Tunbridge Wells;

Morgan Hughes, Croydon ; W. B. Pearsall, Dublin ; J. C. Clarke, Belfast.

The minutes of the last meeting having been confirmed, letters of regret for non-attendance were reported from Sir John Tomes, Sir Edwin Saunders, Dr. John Smith, Dr. Theodore Stack, W. Bowman Macleod and J. H. Redman.

The President announced that both his own term of office, and that of the Vice-President of the Board, had expired, that they did not seek re-election, and that the Hon. Secretary resigned his position.

Mr. F. Canton was elected President of the Board ; Mr. W. B. Macleod Vice-President of the Board, and Mr. W. B. Paterson Hon. Sec. of the Association.

The promotion of Mr. Canton would render the Hon. Treasurer-ship vacant, and Mr. W. H. Woodruff was nominated for this office.

The following gentlemen were nominated as suitable members to serve the Association on the Representative Board :—Messrs. J. McKno Ackland, J. A. Biggs, G. Campion, J. C. Clarke, J. Dennant, S. J. Hutchinson, Johnson, W. Maggs, L. Matheson, J. C. Oliver, J. H. Reinhardt, H. Rose, M. Smale, C. S. Tomes, B. Wallis, J. T. Whatford, C. West, Henri Weiss, and E. Lloyd Williams.

After some conversation it was agreed that the above names, together with others which might be nominated at the Annual Meeting, should be arranged in alphabetical order irrespective of their places of residence, and placed in a conspicuous part of the room within view of all the members present, and that members should vote by ballot as usual, selecting ten names and giving one vote to each name.

A vote of thanks was passed to the retiring officers of the Board, and suitably acknowledged by the President on behalf of himself and his colleagues.

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#### THE BUSINESS MEETING.

The Annual Meeting of the Association for business (open to members only) began at 10.30 in the Art Gallery of the Museum. Mr. S. LEE RYMER (President) occupied the chair, and there were also present during the day the following :—

Ackland, J. M., Exeter.  
 Ackland, W. R., Clifton.  
 Albert, H. L., London.  
 Amore, J. S., Edinburgh.  
 Andrew, J. J., Belfast.  
 Apperly, E., Stroud.

Bacon, W. B., Tunbridge Wells.  
 Baldwin, H., London.  
 Balkwill, F. H., Plymouth.  
 Barnard, A., London.  
 Bartlett, E., London.  
 Barton, E., London.  
 Baxter-Booth, R., Crewe.  
 Bradbury, E. A., Huddersfield.  
 Brand, E., Exeter.  
 Briggs, F., Torquay.  
 Brown, E., Barnstaple.  
 Browne-Mason, C., Scarborough.  
 Browne-Mason, J. T., Exeter.  
 Burt, W., Weymouth.

Cabeil, A., Redhill.  
 Cameron, D. R., Glasgow.  
 Campion, G., Manchester.  
 Canton, F., London.  
 Clarke, J. C., Belfast.  
 Coffin, W. H., London.  
 Cole, J. F., Ipswich.  
 Colwill, F. H., Ilfracombe.  
 Cooper, C. H., Bradford.  
 Cornelius, W. F., Teignmouth.  
 Coxon, S. A., Wisbech.  
 Cocker, A., Sowerby Bridge.  
 Cumine, R. H., Forest Gate.  
 Cunningham, G., Cambridge.  
 Curnock, G. D., London.

Dickinson, M., St. Leonard's.  
 Dudley, E. L., Bath.

Egan, L., Cork.  
 Elmitt, S. F., Newcastle.

Fothergill, A., Darlington.  
 Fothergill, W., Darlington.  
 Fripp, J. T., London.

Gabell, A., Redhill.  
 Garland, T. G., Exeter.  
 Gartrell, J. H., Penzance.  
 Glaisby, W., York.  
 Goodman, E., Taunton.  
 Goodman, W. J., Exeter.

Gunthorp, W., London.

Harding, W. E., Shrewsbury.  
 Hare, S. W., Chichester.  
 Harris Wynn, T., London.  
 Harrison, J., Sheffield.  
 Hay, J., Swindon.  
 Hayman, C. A., Bristol.  
 Headridge, W., Manchester.  
 Helyar, A., Torquay.  
 Helyar, H., Yeovil.  
 Helyar, W., Bristol.  
 Henry, G., Hastings.  
 Hepburn, D., London.  
 Hicks, L., Launceston.  
 Hope, W. H., Wellingborough.  
 Horne, A. D., Newton Abbot.  
 Howkins, T. M., Hull.  
 Hughes, M., Croydon.  
 Hunt, W. A., Yeovil.  
 Husbands, J. E., Great Grimsby.  
 Huxley, F. E., Birmingham.

Jefferson, W. L., Bradford.  
 Johnson, M., Chester.  
 Jones, A., Cambridge.

Kendrick, A., Taunton.  
 King, Roff, Shrewsbury.  
 King, T. E., York.  
 Kirby, A., Bedford.

Ladmore, E. J., Bradford.  
 Lennox, R. P., Cambridge.

McAdam, G. C., Hereford.  
 Maden, W. H., Rawtenstall.  
 Mallett, H., Exeter.  
 Mason, C. B., Scarborough.  
 Mason, H. B., Exeter.  
 Mason, W. J., Carlisle.  
 Matheson, L., London.  
 Matthews, A. A., Bradford.  
 Matthews, W., Liverpool.  
 May, J., Yeovil.  
 Minshall, F. W., Salford.  
 Mitchell, L. J., London.  
 Mitchell, W., London.  
 Morris, W. G., Worcester.  
 Mundell, S., Exeter.

Oliver, J. C., Cardiff.  
 O'Meehan, P., Limerick.

Parkinson, J. L., London.  
 Parkinson, G. W., London.  
 Parson, T. C., Bristol.  
 Paterson, W. B., London.  
 Pearman, E., Torquay.  
 Pearman, G. B., Torquay.  
 Pearsall, W. B., Dublin.  
 Penfold, W., London.  
 Petty, F., Reading.  
 Price, Rees, Glasgow.

Rhodes, W. A., Cambridge.  
 Richards, F. W., Birmingham.  
 Richards, G., Richmond.  
 Riches, C. H., Cardiff.  
 Rilot, C. F., London.  
 Ritchie, T. P., Bristol.  
 Roberts, W. R., Lichfield.  
 Rose, F., Guernsey.  
 Rymer, S. Lee, Surrey.

Sanders, J. J. H., Barnstaple.  
 Sexton, L. E., Plymouth.  
 Smale, M., London.  
 Smith, A., London.  
 Somerville - Woodiwis, West  
 Hartlepool.

Spokes, S., London.  
 Stocken, J., London.

Tanner, T., Manchester.  
 Thomas, H. J., Swansea.  
 Tippet, J. C., Torquay.  
 Tothill, W., Blackheath.  
 Trollope, W. T., Tunbridge  
 Wells.  
 Turner, J. S., London.

Underwood, A. S., London.

Vanderpant, F. J., Kingston-  
 on-Thames.

Weiss, F., London.  
 Weiss, F. H., London.  
 Weiss, W., London.  
 White, G. W., Monmouth.  
 Whittaker, G. O., Manchester.  
 Williams, W. C., Leamington.  
 Woodruff, W. H., London.

Youngman, F., Torquay.

The following visitors were also present :—Messrs. W. C. Barret, Buffalo, N.Y., U.S.A.; G. W. Melotte, Ithaca, N.Y., U.S.A.; A. King, Barnstaple; Dr. Henderson, Messrs. W. May, H. J. Holden, F. Fouraker, W. H. Goodman, and J. A. Mallet, L.D.S., Exeter; C. H. J. Williams, L.D.S., Barnstaple; E. Burt, L.D.S., D.D.S., and C. Hotz, D.D.S., Paris.

Letters expressing inability to attend were announced by the HON SECRETARY (Mr. Smale) to have been received from Sir John Tomes, Sir Edwin Saunders, Dr. Stack, Dr. John Smith, Mr. Bowman Macleod, and Mr. Redmond.

It was reported by the HON. SECRETARY that Mr. F. Canton had been elected President of the Representative Board; Mr. W. Bowman Macleod, Vice-President; and Mr. W. B. Pateson, Hon. Secretary to the Association.

The HON. TREASURER then read his report as follows :—

GENTLEMEN,—It is now just three years since you did me the honour of appointing me your Treasurer, and as my term of office expires to-day I should like briefly to allude to one or two changes effected.

When I first took office the accounts of the Association were kept in such a complicated way by the auditors that I could not under-

stand them, and as I found it almost impossible to meet the auditors to discuss the matter with them, permission was asked of the Board to make a change and appoint some one who was not too "big a person," so to say, to meet me and talk the affairs over, with the result that our present auditor, Mr. Butcher, was appointed; this gentleman takes every interest in our accounts and goes most thoroughly into every item himself at the end of the year, and the accounts are now so kept that I think any one could understand them.

As the balance at our bankers was increasing in magnitude, I thought in the interest of the Association, it would be well to have two signatures to cheques instead of one, and the Board approved of my suggestion and this is now the rule.

The Bank of England would give no interest for money on deposit, and as I looked forward to being able to place some there, permission was again asked of the Board to change our bankers to the London and County Bank; this has been done and we have £300 on deposit there, and this deposit account I am very anxious to see stand at £1,000, for at any moment we may be drawn into legal proceedings which might require such a sum to carry through successfully.

The best has been done to reduce expenses where possible and one expense, which was considerable, was the sending out of applications for payment of subscriptions, and we have now devised a circular that goes for a  $\frac{1}{2}$ d. instead of a 1d., and this makes a difference, when some 400 or 500 have to be sent out, not only in the postage account, but in the stationery also, as no envelopes are used.

The present balance at our bankers is £462 3s. 3d., besides the £300 on deposit account and there is no large amount owing.

Our list of members is steadily increasing and one or two that had been removed for non-payment of subscription, I am glad to say have paid up and joined us again this year. Twenty-two are in arrears for two years, and about 214 for this year.

The Journal is naturally one of our heavy expenses, but not too much so for the value it is to the Association, and if it were not for the large amount of gratuitous work given to it by a few members I should be sorry to think where the Journal would be; for in our present financial position, it is utterly impossible that we could pay for the work done.

I thank you, gentlemen, for the courtesy always shown me by all members that I have had occasion to communicate with, and I trust that the gentleman you may appoint to succeed me will find the plan adopted for keeping the accounts a very simple and easy one.

The HON. SECRETARY then read his report as follows:—

In placing before you a brief epitome of the work of the British Dental Association during the by-gone year, we have first to report on the special business which was intrusted to us at the last General Meeting.

We were instructed to consider the scheme proposed by Dr. Rentoul, a member of the British Medical Association, for establishing societies or clubs, through which people with small incomes could secure for themselves good medical and dental attendance at a moderate scale of fees. The scheme has not yet received that amount of support from the medical profession which alone can establish it on a permanent basis. Several members of your executive attended a meeting of the Metropolitan Branch of the British Medical Association called to consider the scheme, but the result was so unsatisfactory that the Business Committee could only recommend a waiting policy for the present. If the scheme be further developed by its promoters, your representatives will no doubt be prepared to take whatever part in it they may deem desirable for the welfare of the profession.

In accordance with your instructions a Committee was formed to carry out the scheme elaborated by Mr. Fisher, of Dundee, for collecting information regarding the teeth of the children in such schools as might prove accessible to the representatives of this Association, and the Committee will make their report in due course.

A copy of the standing orders of the Association has been compiled, and will be issued to the members with the Bye Laws.

A change has been made in the Business Committee, by increasing the number of elected members from six to nine, and making room for more provincial members.

Some opinions have been expressed on the Representative Board, regarding the classification of the members of the executive, many holding that the distinction of London and provincial should be dispensed with, and this question will in all probability come under the consideration of the Representative Board before long.

The question of the Association having compiled for it in a popular form, a Treatise on the Teeth and their Preservation, and publishing it for general distribution, was brought before the Representative Board by one of the members, and argued with great ability and fairness. The discussion was prolonged and exhaustive, and resulted in the Board, by a large majority, disapproving of the project.

A circular indicating the position of Dentistry under the Dentists Act as represented by the Association, was issued by the Midland Branch, and the Business Committee laid the matter by resolution before the Representative Board, to obtain an opinion as to the propriety of this course of action on the part of the branch. The Board passed a resolution to the effect that it was undesirable.

There has been no active litigation undertaken during the past year by the Representative Board, but great efforts have been, and are still being made by one of your representatives, to complete a case of fraudulent registration under Clause 37 of the Dentists Act, and the Business Committee hope that a sufficiently strong case may yet be made to enable them to ask the permission of the Representative Board to enter a process against the offender.



The administration of Clause 37, by the Medical Council, has long been a source of great dissatisfaction to the Association, particularly so, as recently a number of cases, which have been refused or held over by the Medical Council, had been admitted upon the Register. This feeling found expression at the last meeting of the General Medical Council, when certain members, under instructions from the Midland and Scottish Branches, took the matter up, and although at present the results may not be very encouraging, your executive have reason to believe that the movement will be most beneficial to the profession, and that it will lead to further consideration of Clause 37, and perhaps to such a reading of the Clause as has long been advocated by some of your representatives, as the proper one to be adopted by the Council.

The Medical Council has been successful in stopping the very objectionable advertisement of "Dentist to a certain Royal Household," which was so persistently issued by an advertising practitioner, a feat which we had failed in accomplishing for ourselves. The case of a person who had covered an irregular practitioner by publishing the qualifications of M.R.C.S. and L.R.C.P. on a brass plate in a Midland town, was brought under the notice of the Royal College of Surgeons. The Secretary immediately took action, and inasmuch as the offender did not possess the M.R.C.S., this method of covering an irregular practitioner was discontinued.

Great dissatisfaction having been expressed in certain quarters at the indifference of the Business Committee to the numerous offences against the Dentists Act, and the abstinence from prosecutions, the matter was brought before the Representative Board, who, after listening to the statements laid before them, unanimously ratified the course followed by the Committee.

This being the third year of office of the President and Vice-President of the Representative Board, and of the Hon. Secretary of the Association, these gentlemen retire from their respective offices, and their places have been filled by Mr. F. Canton, Mr. W. Bowman Macleod and Mr. W. B. Paterson respectively.

During the past year we have to regret the loss, by death, of four members—Mr. A. Hill, of London; Mr. H. Bromley, of Southampton; Mr. W. R. Wood, junr., of Brighton; and Mr. W. A. Turner, of Leeds. The Representative Board have caused the sympathies of the Association to be conveyed to the bereaved families, and feel sure that this meeting will mournfully approve of their conduct. While on the very eve of the meeting we notice the death of Mr. W. H. Woodhouse.

The election of 47 new members has raised our present total to 798 against 751 last year, showing an increase of 47; but 11 have been removed for non-payment of subscription, 6 have died, 10 resigned, and 2 gone and left no address—making the net total of our members 769, as against 751 last year.

The PRESIDENT moved the adoption of the Treasurer's and Secretary's reports, which, he said, spoke for themselves, and were on the whole, he thought, satisfactory.

Mr. FOTHERGILL seconded the motion.

Mr. MATHESON: May I ask a question as to what the name of our new Treasurer is to be? It was not announced.

The HON. SECRETARY: We have not yet elected him.

The PRESIDENT: It is the business of this meeting to elect a Treasurer.

The HON. SECRETARY said it had been decided by the Representative Board that the general meeting should appoint a certain number of members to act as referees to receive papers and examine them. The meeting resolved to re-elect Messrs. J. Stack, J. Smith, E. Lloyd Williams, Cunningham, Matheson, A. Kirby, and W. E. Harding; and to elect Mr. A. W. Buller Tomes in the place of Mr. Spence Bates, deceased.

The HON. SECRETARY said that the date and place of meeting for 1891 had been before the Business Committee and a meeting of the Representative Board; and it had been decided to recommend that the next meeting be held in London, and that Mr. Smith Turner be elected President. They had also to fix the date of the meeting. The three sets of days in August were:—13th, 14th, and 15th; 20th, 21st, and 22nd; and 27th, 28th, and 29th.

Mr. J. T. BROWNE-MASON moved that the dates selected for the next meetings be the 13th, 14th, and 15th of August.

Several members expressed themselves in favour of the 20th, 21st, and 22nd days of August, dates usually selected when convenient.

Mr. REES PRICE: I should like to ask whether we are bound to confine it to the month of August?

The PRESIDENT: The month of August has been considered most convenient.

Mr. CUNNINGHAM suggested that the Association might have information from the Executive of the London Branch as to what time would be best for them to hold the meeting.

Mr. W. COFFIN expressed himself in favour of the earlier date, which Mr. Underwood explained would interfere with the production of the August number of the Journal of the Association. A number of members seemed to regard the later dates with disfavour, but no better suggestion being forthcoming, it was

eventually resolved that the 20th, 21st, and 22nd of August be the dates selected for next year's meeting.

Mr. PEARSALL then moved that the meeting for 1891 be held in London, and that Mr. J. Smith Turner be President-Elect. It gave him (Mr. Pearsall) the greater pleasure to move the resolution because he had been more or less in conflict with his London colleagues for two or three years past. But he wished to explain that his action was not due to any personal feeling, but to a desire to make the working of the Association smoother. As to Mr. Turner, no one knew better than he did what Mr. Turner had done for the Association. He had been unsparing of energy, time, leisure, and everything that showed a man able to do his duty. He (Mr. Pearsall) thought Mr. Turner had in every possible way won their respect by the manner in which he had carried on the business of the Association for a great number of years. He did not think he should be contradicted when he said that but for Mr. Turner's self-denial and long-suffering he did not think the Association would be where it was at present.

Mr. J. FENN COLE seconded the resolution, which was carried unanimously.

Mr. F. Canton having been elected President of the Representative Board, there was a vacancy for a Treasurer to the Association. The name suggested by the Representative Board was that of Mr. Woodruff, London.

On the motion of Mr. KING (York), seconded by Mr. REES PRICE, Mr. Woodruff was elected as Treasurer.

The next item on the agenda was the appointment of ten members to fill vacancies on the Representative Board, those elected being selected from the nominations sent in by the Branches. The list of those nominated was as follows:—J. M. Ackland (Exeter), J. A. Biggs (Glasgow), J. C. Clarke (Belfast), G. G. Campion (Manchester), J. Dennant (Brighton), S. J. Hutchinson (London), Mr. Johnson (Chester), W. A. Maggs and L. Matheson (London), J. C. Oliver (Cardiff), J. H. Reinhardt, H. Rose, Morton Smale, C. S. Tomes, Boyd Wallis, C. West, and E. Lloyd Williams (London), and J. H. Whatford (Eastbourne). It was resolved that the voting should be by ballot. Messrs. David Hepburn and C. A. Hayman were appointed scrutineers, and Mr. Cunningham referee. The following were elected in the order named:—Morton Smale, C. S. Tomes, G. G. Campion, J.

A. Biggs, L. Matheson, J. M. Ackland, J. Dennant, M. Johnson, C. West, and E. Lloyd Williams.

Mr. PEARSALL asked to be allowed to withdraw the following notices of motion :—

1. "That the Articles of Association and Standing Orders of the British Dental Association be brought into harmony by revision or re-construction, and that some definite order of procedure be adopted at all meetings of the Representative Board and the Association for the orderly dispatch of business."

2. "That the Business Committee of the British Dental Association shall, before proceeding to elect a candidate or candidates for membership of the British Dental Association, be *required* to notify the names and addresses of such candidates to the Honorary Secretaries of Branches, the election of these candidates to be carried out at the next meeting of the Business Committee after due notice has been so given to the Branch Honorary Secretaries ; the names of candidates to be withdrawn should any Branch Honorary Secretary show cause or make reasonable objection why the election should not be carried out."

3. "That it is desirable, in the interests of the British Dental Association, that some provincial members should be added to the Publishing Committee, so as to bring the Journal into touch with the general body of members, and that at least twelve original articles on matters of professional practice and interest (exclusive of dental politics or the policy that should be advocated by the Association) be commissioned and published each year in the Journal, which articles shall be paid for on the terms that may be recommended by a Committee formed from members of the Representative Board, and that all original articles on any professional subject should be limited to six pages of the Journal."

He explained that unfortunately in the letter accompanying the notices of motion which he sent to London he did not state that he wished them to be considered by the Representative Board. He said he wished to have the motions considered at the next annual meeting, forgetting to put in after the word meeting, "of the Representative Board." The officers, acting on the very letter of his terms, put down the notices of motion for the annual meeting of the Association. He therefore asked the meeting to be kind enough to permit him to withdraw the notices of motion, so that he could bring them before the Representative Board at another time. He had reason to know that the matters which he wished to bring under discussion would be treated with every fairness and consideration, and it would greatly help toward the harmony of the

meeting of the Association if the members would allow him to do what he desired. One of the members was good enough to suggest to him the previous night that he had been "got at," but he (Mr. Pearsall) need hardly tell the members he was not the type of man to be "got at." The matters to which he wished to draw attention had come under his notice as one of the organisers of the Association, and he desired to get rid of matters which he considered produced friction. He thought that in that way he should be met fairly by a great many London friends with whom he had had a chat on the subject. They had not advised him in the matter at all; he had taken the course he had entirely on his own responsibility.

The PRESIDENT said Mr. Pearsall was quite at liberty to withdraw his notices of motion.

Mr. PEARSALL said he wished to withdraw the notices of motion and he wished to give an explanation of his conduct, because it was better for everyone to know his reasons.

The PRESIDENT: You have given a very clear explanation.

The HON. SEC. (Mr. Smale) reported that the following resolutions had received the approval of the Representative Board:— (1) "That the following addition be made to Bye-law 8, after the words President-Elect; 'The President and President-Elect shall be *ex-officio* members of all Committees, except the Publishing Committee of the Association.'" (2) "That in Bye-law 15 the words 'and Vice-President' be inserted after the words 'President-Elect.'" On the motion of Mr. T. E. KING (York) the action of the Board was approved.

The PRESIDENT moved that the best thanks of the Association be presented to the Right Worshipful the Mayor of Exeter (Mr. T. Snow) for his reception and kindness; to the Committee of the Albert Memorial Museum for the use of the building; and to the President and Committee of the Devon and Exeter Hospital for the use of rooms at that institution for the purpose of carrying out demonstrations.

Mr. J. T. BROWNE-MASON seconded the motion, which was carried unanimously.

Mr. SMITH TURNER proposed that a vote of thanks be awarded to the Organising Committee in Exeter and all who had taken so much pains to provide for the reception of the Association.

Mr. HEADRIDGE (Manchester) seconded the proposition, which was heartily agreed to.

Mr. MUNDELL moved that a vote of thanks be passed to the Representative Board for the way in which they had managed the affairs of the Association. He was sure the members of the Association could only wish that the Board would go on in the same manner as they had hitherto.

Mr. ANDREW (Belfast) seconded the proposition, which was carried by acclamation.

This closed the business meeting and there was a large influx of ladies and gentlemen when the doors were opened for the admission of visitors.

#### THE PRESENTATION OF MR. SMITH TURNER'S PORTRAITS.

The PRESIDENT, who was received with applause, next said:—Ladies and Gentlemen, I have been requested by the Committee to the Turner Testimonial Fund, to present to the Association a portrait of Mr. Smith Turner and also to present to Mr. Smith Turner, or rather his family, a replica of that portrait. It is rather a remarkable position that I am in at the present moment, as President of this Association. I have to present the portrait to the Association; I have to receive it and return thanks for the same; and I have a further pleasant duty to perform, namely, to present the replica to Mr. Turner and his family. I can only say that the important business of this threefold position I shall endeavour to do as well as I can. We have heard some eulogistic remarks as to the valuable services rendered by Mr. James Smith Turner to the British Dental Association from Mr. Pearsall and others. I do not know that any more just eulogy than that delivered by Mr. Pearsall could be delivered to you. I think his observations were entirely to the point and show how worthy, valuable, and I may add how successful in regard to its working Mr. Smith Turner has been to this Association. Mr. Pearsall observed that he had known Mr. Turner for some years. I think I can go back to a very much longer period. I have known Mr. Smith Turner since the year 1856, and I have known him intimately. He was one of the pioneers of the reformatory movement. He has been a hard-worker, he has been a giant in regard to the reformation in our profession. His work has always been conscientiously as well as ably performed; and it has always been a pleasure to act with him as I can testify through all those long years I have spoken of. Mr. Turner was one of the first to come forward in 1856, and there he is

now still at the work and long may he so continue. Of course all this is known to many of you ; but perhaps not to all. Such being the facts of the case, it is no wonder that a spontaneous feeling arose in the minds of the members of the British Dental Association that a record of their feelings of gratitude should be presented to the Association and to Mr. Smith Turner, so that there should be a permanent recognition of the services I have referred to. It is not much more than a year ago since the idea of these presentations was mooted. It was universally received with the utmost approval and almost in less than no time the subscriptions which were necessary in order to get the portraits produced by a metropolitan artist of note (Mr. Sidney Hodges) were received. Mr. Hodges' fame is not only metropolitan. I may mention as a matter of very great interest that Mr. Hodges is a native, I think, of Exeter, certainly he is a Devonshire man. His first important work was a painting of the late Dr. Phillpotts, a distinguished Bishop of Exeter. That painting called forth a considerable amount of favourable criticism, especially by the *Times* newspaper, in which there was a very important review of that fine portrait by Mr. Tom Taylor, who was the critic in art matters at the time. I think the Committee have therefore selected a name second to none in regard to the painting of the portrait which I have the pleasure of presenting to the Association on behalf of the Committee and subscribers. The presentation to the Association will, I am sure, be received by you with the utmost possible satisfaction. The portrait is considered a striking representation of our dear old friend. It will remain in the custody of this Association as I trust, to all time, and those who in the future hear of the gigantic work which Mr. Turner has accomplished, will be able to see the representation of the man himself. I omitted to specifically refer to the great work as I may call it, done by Mr. Turner. It was in regard to the passing of the Dentists Act. The work Mr. Turner undertook at that period was something astounding. For weeks, months, years, night and day, the business was in hand. Parliamentary Committees had to be attended and the House of Commons frequented night after night ; all sorts of difficulties and labour without end. I will not say that Mr. Smith Turner was the only one engaged in that work. There was Sir John Tomes, for instance, and others. But to-day we have only one before us, and that is Mr. James Smith Turner, who has stood prominently and honourably forward

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throughout the reformatory proceedings in connection with the profession, and especially in regard to the establishment and development of the British Dental Association. Therefore I have very great pleasure in presenting his portrait to the Association and in the name of the Association receiving it as its President. And now I have to beg Mr. Turner as the representative of Mrs. Turner and family to accept this replica, which I could scarcely have known from the original. The portrait and replica are both the work of the same artist. Nothing, I think, can be more gratifying to one's wife and family, especially when the head of the family is held in the affection and esteem I know Mr. Turner is by his family, than the presentation of so faithful a likeness. I will ask Mr. Turner on behalf of his family to accept this replica. I wish him all prosperity and long may he be spared to his family and to ourselves.

Mr. J. SMITH TURNER, who was received with great cordiality, and who, at an impromptu request, stood by the side of the portrait of himself presented to the Association, in replying, said :—Mr. President, ladies and gentlemen, I think it was a most fortunate thing for me that I took the advice of a friend, who is not now in the room, and did not prepare a speech or try to prepare a speech with which to reply to the presentation speech that would accompany the picture to be presented to my family, for I am perfectly sure if I had tried anything of the kind it would have been an utter failure. At the same time, I feel it is very difficult under the circumstances to regulate one's thoughts or to control one's feelings, because, however hard one may have worked, and however conscious a man may be of having, perhaps, been imprudent in the extent to which he has exerted himself, still he feels, when he has these matters put before him and such an expression of feeling as this from his colleagues, that he is scarcely worthy of such encomiums as have been passed upon me to-day. It is difficult to listen to these encomiums and still more difficult to reply to them. To me it is something strange to look back and think how thoughtlessly—perhaps how recklessly—I entered into a work which I could not realise, and which, if I had been able to realise, I should have shrunk from, and should have shrunk from very reasonably and with only a fair amount of human caution. As it was I undertook the work, and I am bound to say that, however hard I may have worked, and however constant may



have been my application to the work in the earlier stages of dental reform, yet, had it not been for the continued support and encouragement I received from others, more especially from the high and sagacious intellect of Sir John Tomes, all my powers would have been unavailing. As it was, he was there with others to assist me, and I feel I may say this much—that, had two or three other men tried to do the same thing, they would in all probability have failed. It was a Punch's Committee throughout the passing of this Dentists Act. It was a good Chairman, a good Secretary and a good Treasurer, with two of them frequently absent. I was allowed to find out my own way, and I was fortunate in finding out those who could point me in the right direction. I speak now of men entirely separate from the profession. I almost learnt to become a Parliamentary agent. Indeed, I have been told that a London official was written to by a gentleman in the country, who wanted to know who Messrs. Tomes and Turner were, as he wanted a private bill passed. I have been amply rewarded for the efforts I made in passing the Dentists Act. It may have escaped the memory of several here, and others may not know it, that I had a handsome timepiece presented to me, which cost about £70, and that I had a handsome purse presented to me with something like £300 in it. So it is really like ancient history to tell me anything about the Dentists Act, and it makes me blush to feel how well I have been already paid by my colleagues. However, after the Act came the British Dental Association. I had certainly a good deal to do with the formation of that Association. There was a Secretary, Treasurer, and President, and if it had not been for our President I do not think the Association would be going on now. I had the pleasure of being Honorary Secretary, and it was only after the Association had been organised and we could get in some subscriptions, that we could afford to employ a paid Secretary. I say it is gratifying, and when I look upon these meetings and Branch meetings I feel more than satisfied with the efforts I made in that direction; but the work, at all events in the earlier period of dental reform, was very absorbing, and I had work at home as well as work abroad. I do not speak of my profession. A man cannot have a family without family ties, and cannot have children without having important duties to discharge towards them. When I undertook the work I had a young and growing family, and I am bound to say here that,

although I was out night after night, sometimes until three or four o'clock in the morning ; although sometimes I had but few hours' sleep in a week ; and although I seldom saw those children for weeks together, I never heard a murmur at home. There was some one there who more than took my place, and attended to the wants of my children without ever troubling me. We very often hear in these days a great deal of talk about the functions of women, their social position, and their duties toward society ; about the position they ought to take in industrial life, and in literature and art. But, ladies and gentlemen, I think there is a duty which a woman may perform without ostentation, and aid society far more effectually than by appearing on public platforms and making speeches—at home. If I had not had the opportunity of leaving my family business entirely to the care of my wife, I never could have attended to dental reform or to the beginning of the British Dental Association. It is therefore with extreme pleasure and gratitude that I thank you for this opportunity, the first I ever have had, of recognising in public the valuable aid I received from my wife in the matter of dental reform. I hope you will feel satisfied that the kindness which prompted you to present her with my portrait has not been misplaced. I thank you most sincerely for having listened to me, and I thank you for your kindness in presenting my family with the portrait, and also for having considered my portrait worthy of being possessed by the Association. My poor old mother used to tell me, when I went out sailing—and I was very fond of going out sailing—that she would never be afraid of my being drowned, because anyone who was born to be hung would never be drowned. I suppose it never occurred to her that I was to be hung in that way, or that I would be hung twice (pointing to the portrait). Still, you see it is always the unexpected that happens. I suppose that hanging a man on a wall is about the first step towards placing him on a shelf. ("No, no.") But, by-and-bye, when I am placed on a shelf, I hope you will remember me kindly, with all my faults. I thank the Committee who have kindly undertaken the financial part of the work in the getting up of the presentations. I thank Mr. Smale and Mr. Canton personally for their kindness. The Committee never told me anything about it ; they have been most careful and considerate of my feelings. I thank Mr. Hodges for his care in painting these pictures, for I am sure he

deserves our warmest thanks, and the money he receives will not repay him for the trouble he has taken. Once or twice he threw down his brush in despair and said, "The devil himself can't paint you, Turner." I suppose he thought I was a chameleon. But no matter. I thank you.

At the close of Mr. Turner's speech there was prolonged cheering.

Both the portrait and replica were exceedingly good likenesses of Mr. Turner, who was represented reclining in an armchair, the face being thrown into expressive relief by a background of dark shading. Each was handsomely framed. The portrait presented to the Association, had the following inscription:—"J. Smith Turner, Esq., President of the Representative Board of the British Dental Association, painted by the direction of the members as a gift to the Association, in recognition of his untiring devotion to the welfare of the profession represented by that body, and as a public expression of the great esteem and high personal regard in which he is held."

The PRESIDENT announced that it was intended in due course to place a similar tablet on the replica presented to Mr. Turner's family.

Mr. WALTER COFFIN suggested that subscriptions be invited for the purpose of providing photogravures or engravings of Mr. Smith Turner's portrait for the members of the Association.

Mr. BROWNE-MASON supported the suggestion, which was unanimously adopted.

The PRESIDENT then proceeded to deliver his valedictory address, as follows:—

Another year of the existence of the British Dental Association—completing the tenth since incorporation—has passed and the scanty grains of sand falling through the glass remind me that only a short time in the Presidential Office remains wherein to compress my farewell address on the present occasion of meeting in this ancient and interesting City of Exeter—the fair capital of the West.

From the official reports which have been received this morning, you will have learnt that the proceedings of the last twelvemonths, if not conspicuous by specially new departures, have at least witnessed a steady amount of work and plodding in the evolutionary process. The Representative Board and the Business Committee have spared no pains to develop the resources of

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the Corporation, whilst the several Branches have exhibited such evidence of growing vitality as to promise well for the future of the Association.

The number of members has reached nearly eight hundred, and I suppose that means the largest combination of specialists in the world. It also means a professional power in the State, which if wisely, unitedly and legitimately employed should prove absolutely irresistible in its operations.

It is not to be supposed that the members of so numerous a body will all think alike. Indeed, that would be most undesirable, because the best legislation is invariably the outcome of divergent views expressed in free discussion. In the display of these divergent views we must, of course, give one another credit for holding opinions of a conscientious nature and the ultimate result of fair deliberation entitles it to an honourable support all round. In following such action unity becomes strength indeed.

Before proceeding, allow me to refer to the great pleasure it has afforded me to-day in having been privileged on behalf of the many subscribers to the Turner Portrait Fund, to present to the Association so excellent a likeness of an excellent man. The name of James Smith Turner is familiar to all of us as a household word. His labours in the field of professional reform have been not only prodigious, but happily, also successful. As these labours are indelibly recorded in our archives, they cannot and will not be forgotten, but the face and presence so personally dear to us must in the ordinary course of events—a long time ahead as we devoutly hope—pass away, and yet there will remain a legacy to be greatly prized in the artist's graphic representation of the original as seen in the portrait, now the property of the Association.

The general events of the year, as already mentioned, do not require much of the short and valuable time at our disposal to be taken up in wordy comment, although there is one crucial question which has forced itself very much to the front of late, namely, that of professional education and examination, which cannot be entirely passed over. In consideration of the amount of business to follow, I will not even glance at the interesting subjects which have lately been discussed as to alterations in existing modes of education, the supply of artificial structures to the necessitous poor and other matters which have found publicity in the Association Journal from time to time; but the weighty

opinions of leading men upon the future status of dental surgery as a profession, now current, are of vital moment and induce me to point out in brief, that there are three sets of opinions existing on the subject :—

1. That the *status quo*, i.e., the L.D.S. diploma, meets all requirements.

2. That a medical qualification ought to be acquired before the L.D.S. is allowed.

3. That dental surgery ought to exist as an independent profession.

There is nothing new in any of these propositions and almost all that can be said in favour of or against each has been said over and over again. Nevertheless, the fact remains that each has still its partisans—certainly in different proportions, but in debateable questions of import the index of mere numbers is not always to be regarded as infallible. The subject under notice, then, having been again broached, I venture to offer a few observations thereon, taking the opinions referred to in inverse order :—The independent proposition I know something about, as I was most closely associated with those who espoused it in the year 1856, the period of the first determined movement towards the organisation of dental surgery as a profession. Many prolonged and anxious meetings were then held—the first taking place on September 22nd of the year named, at the “London Tavern” in the City of London. At these meetings different schemes were put forward and discussed as to the proper course of action, including the suggested idea of affiliation to the College of Surgeons, the conclusion arrived at being that the profession would best flourish on an independent basis, and the College of Dentists was accordingly proclaimed. This action immediately received a large amount of support, but the promoters had to face serious discouragement from a proportion of others whose professional position entitled them to respect, and whose views, although favourable to reform, were not in accord with an independent organisation. Nevertheless, the independent party, believing themselves right, steadily persevered, and if they ultimately failed in obtaining a charter of incorporation for the College of Dentists, as they did in fact, it was certainly not on account of lethargy on their part. The other side, as represented by the Odontological Society of London, although numerically small in comparison to the College of Dentists, was highly in-

fluent. The bulk of the dental practitioners of the day remained quiescent. The points at issue between the two active bodies were thoroughly and publicly ventilated for years and at last, as everybody knows, the Odontologicals succeeded in their policy and the College of Surgeons was granted authority to issue diplomas in dental surgery. This act gave the College of Dentists its *coup de grace*. An independent institution, such as the College of Dentists, could only have lived, under the circumstances thus altered, as an impediment to progress; hence the subsequent fusion with the odontological side and the general acceptance of the issue by the members of the College who properly regarded the honour of the profession as above party and a united front as the essential element of success in a calling newly recognised by parliamentary authority.

In passing, I should mention that educational requirements were not lost sight of by the College of Dentists during its existence. The Metropolitan School of Dental Science was organised. A curriculum very much in accord with that now in force for the L.D.S. was drafted and no doubt would have been adopted, had the College gone on.

Two other plans had been submitted for consideration—one being that no curriculum at all should be enforced and that examination alone should prove the test of efficiency; the other that candidates for admission to the College of Dentists should be in possession of the diploma of membership of the College of Surgeons, as a qualification for the special dental examination. Neither proposal met with favour.

From what has been advanced, it will be gathered that the independent proposition collapsed after years of deliberation and argument through the preponderating influence of the other side, together with the failure of the mass of dentists to render support at a period when every possible opportunity was afforded for so doing.

As to the proposition that a medical qualification ought to be acquired before the L.D.S. is allowed, I have mentioned already that such an idea found exponents amongst certain supporters of the College of Dentists who did not regard it as inconsistent with independent action, although the majority thought otherwise, and so it fell through.

The policy of confining the specialty to qualified surgeons, as advocated by others later on, certainly did not include any ques-

tion of independence. The "Association of Surgeons practising Dental Surgery" was started on a hard-and-fast line on the principle that the practice of dental surgery should be exclusively confined to surgeons and without sympathy for outsiders, however eminent. This limited programme failed entirely. It dealt out wholesale excommunication to all whose names did not appear on the Medical Register. It offended, through its narrowness of conception, the larger number of the best men whose names were enrolled thereon.

More in touch with the spirit of the times, other thinkers have advocated that the qualification in dental surgery should be held conjointly with a diploma in general surgery. Few, I apprehend, would object to the expression of such a view—the real point rests in regard to compulsion in the matter. The new regulations of the College of Surgeons of England, which have only come into force during this year, may at least be said to encourage the voluntary acquirement of the diploma of membership in conjunction with that of dental surgery. Beyond this it appears to me to be unnecessary to proceed under present conditions.

The only proposition of the past which received the necessary support to bring it into being, was that which now exists as the recognised licence in dental surgery. This qualification has proved of such advantage to the profession of dental surgery as to render it doubtful whether the success of any other policy could have been attended with superior results. The measure of success can scarcely as yet be gauged, and the virtue of patience must be exercised as to whether, and in what way it can be improved upon in the future. To await the result of experience is perhaps irksome, but the great work of building up a profession upon a lasting basis may not be unduly pressed. A great author, Goethe, has observed, "I cannot but look upon it as one of the greatest misfortunes of our age that it allows nothing to ripen quietly; that the next moment so to speak, devours the preceding, that no time is allowed for digestion; and that we live from hand to mouth without leisure to bring forth any finished product."

The Dentists Act was a sequence of the institution of the licence in dental surgery, as was the establishment and incorporation of this British Dental Association a necessary sequence to the Dentists Act. Taken altogether, we are *de facto* in possession of an organised system of education and examination, of legislative authority and of political action, which is working fairly well.

It appears, therefore, that the supporters of the *status quo* have a right thus far to claim for it the realisation of practical and beneficial results of a highly important character. If this be so our duty clearly lies in unitedly and loyally upholding it. Nevertheless, I am convinced there is need for improvement and development.

The requirements for the L.D.S. diploma as has been often said, being equal in degree although different in kind to those of the M.R.C.S., involve the same amount of time, work and expense and should by right, but do not in fact, secure equal relative privileges. That practical exclusion from some of the highest official positions connected with our specialty should be the lot of dental licentiates not possessing purely surgical qualifications, whilst possessors of the latter, *sine* the dental qualification, are allowed to register as dentists and also to be eligible to dental appointments, is to my mind, altogether anomalous and unfair. The Dentists Act upon this and other points calls loudly for amendment, so as to remedy defects which have become only too apparent.

We may take it for granted, I am sure, that the members of this strong Association will not be wanting in energy to do their part at the proper moment towards securing the just demands of the profession in this matter. The opportunity of amendment may not be far distant; already the members of our Colleges are claiming a share in the elective rights at present confined to a privileged few, and why should not the licentiates also be included?

Having compressed into the smallest possible limit what I wish to convey upon this important consideration, I must pass on to refer to the working of the Benevolent Fund. When this Fund was first started there were some doubts expressed as to its necessity, but these have been effectually dispelled as time has gone on; the actual experience of the Committee to whom the administration has been deputed, proving beyond question that the dental calling is no exception to the rule in all avocations, so that, like others, we have "the poor always with us." To meet cases of distress amongst our fellow practitioners, their widows and orphans, is the function of this Fund, and from the reports of the Committee periodically presented, it will have been seen that its resources have been tried to the utmost capacity. It has only been through the exercise of economy in management and vigilant investigation as to absolutely deserving cases, that so



much in the way of relief has been accomplished. All that could be desired, in some instances, could not be undertaken by reason of limited resources, but as the beneficent operations of the Fund become more fully known, doubtless support of an extended nature will be liberally accorded, and then relief will be possible in directions at present not untouched, although urgent.

The obituary record of the year, we sorrowfully note, is a heavy one, including the names of six who were members of our Association. Their relatives have all our sympathy, I am sure. The names of our departed members are Charles Henry Bromley, of Southampton; William R. Wood, jun., of Brighton; W. A. Turner, of Leeds; Alfred Hill, of London; J. Holland, of London, and J. Lindsay, of Edinburgh, and to which has now, alas! to be added that of Mr. W. H. Woodhouse; all names to be remembered as having taken part in the work of professional advancement. It will not be considered invidious if I try to pay a special tribute to the memory of Alfred Hill, as one having long occupied a leading and honourable position in the onward march. Alfred Hill was amongst the first to engage in the labours of the reformatory movement in 1856, and to him the College of Dentists was indebted for a vast amount of valuable assistance, most unostentatiously given during the greater period of the existence of that institution. Closely associated as I was with him for several years, I can testify to his high character and intense devotion to his profession, as exemplified during his official connection with the College of Dentists, and also for long years subsequently in the able discharge of numerous duties appertaining to the several positions he filled with signal credit to himself and advantage to the cause he served. He was endowed with ready and effective power of expression both of tongue and pen, and this power was all his life exercised with judgment as well as geniality. He passed away in possession of the affectionate regard of all who had the privilege of his acquaintance.

I have now to offer my sincere acknowledgments and thanks to all connected with the British Dental Association for the plenary indulgence accorded me in my shortcomings, and especially to its able officers for their invaluable support. To have occupied the position of your president means a distinguished honour for life, and one which I can assure you I shall always appreciate.

It is pleasing to know that in our profession its members are ever ready to recognize services, however humble, when such are

rendered to the best of one's ability in good faith. Thus I have found it, and can now, after an experience of thirty-four years contemplate with gratification that in the course of that period my brethren have entrusted me with several offices of honour—including the two most eminent, namely, those of President of the Odontological Society of Great Britain, and of this Association. Allow me to take the present opportunity of expressing my sense of gratitude to you and generally to my professional friends, for all their consideration.

The pleasure remains to me to induct my successor in office. The name of Mr. Browne-Mason has been so long and honourably known in connection with the work of our Association that—excepting as a formality—no introduction is needed, and I have only to ask him, on your behalf, to take this chair in full assurance that it will be right worthily occupied.

MR. SMITH TURNER proposed a vote of thanks to the Retiring President (Mr. Lee Rymer) not only for the manner in which he had conducted the business of the Association during the past year, but also for the admirable address he had delivered.

The proposition was unanimously agreed to.

The PRESIDENT having returned thanks, he vacated the chair, which was taken amid loud applause by the President-Elect (Mr. J. T. Browne-Mason).

The members then adjourned for luncheon.

On re-assembling after luncheon, the PRESIDENT-ELECT proceeded to deliver his address. He said :—

GENTLEMEN,—I cannot commence my address to-day without expressing my profound sorrow at the cloud that has come over our meeting on this occasion, owing to the sad loss that has fallen on the Right Worshipful the Mayor of this city and the Mayoress, through the sudden death of Mrs. Snow's father. This sorrow will be especially present to all of those who are in any way connected with our ancient city, for the family of the Snows has taken a prominent part in its municipal life for many generations, and is held in high honour and sincere affection by every Exeter citizen. The young wife whose father has passed away with such terrible suddenness is sure of our most heartfelt sympathy, for her winning grace and kindly disposition have already made us look upon her as one of us in very deed, and her grief in consequence is truly ours.

The Right Worshipful the Mayor has from the first announce-

ment of our proposed visit to Exeter taken the warmest interest in this Association, as evidenced by the reception he had prepared for us last night, and I am sure all members of the British Dental Association will endorse my sincere expression of sorrow that so deep an affliction should have thus early overcast his married life.

In taking up the proud position of President of the British Dental Association, I must thank you for the great honour you have paid me in placing me in the position of the highest trust and confidence it is possible for a professional man to hold—that is, to be chief, for the year, of the Association that embraces all the men that are of eminence and note practising his profession in the United Kingdom of Great Britain and Ireland. It is a position that indeed has caused me great searchings of heart as to my worthiness to succeed such men as John Tomes and Edwin Saunders, of London; John Smith, of Edinburgh; Daniel Corbett, of Dublin; not to mention Brownlie, H. Campion, who was an Exeter man, and Spence Bate, who presided over the Association at its first visit to the Western Branch at Plymouth in 1884. But I trust to the support I hope to receive from the members of the Association, by whose kind vote I hold office, and specially from the assistance of the members of the Representative Board and our Secretary and Treasurer, to conduct my year of office to a worthy conclusion.

And now I would give a few words of welcome to the Association at its meeting for its tenth Conference in my native city—a city ever foremost in showing hospitality to any learned or scientific body—our very Mayor's chain of office being an acknowledgment from the Royal Archæological Society of Great Britain of the reception it received here. Our city may not be the centre of imperial government and the focus of the nation's commerce and wealth like London, nor yet, like Edinburgh, may it boast of a life full of historical romance, as well as of being the past capital of a race of kings, the modern representative of which has so eminently ruled the nation for the past half century; nor has Exeter the advantages of being a university centre, such as Cambridge or Dublin, nor is she a huge commercial emporium like Glasgow or Liverpool, cities which all have vied with each other in their hospitality towards us; but in antiquity she yields to none of these.

Her Right Worshipful Mayor is the representative of an un-

broken line of Mayors, dating from the year 1200, when King John granted the city a Charter conferring on her citizens the right to annually elect a Mayor, "who," to use the language of the old document, "to us may be faithful, discreet and fit for the government of our said city." This shows Exeter to have been possessed of the Mayoralty thirteen years sooner than London, to which city the like privilege was granted by the same monarch in the year of our Lord 1213.

Exeter was, to go back to the oldest records, the capital town of the Damnonii, one of the tribes of the ancient Britons and subsequently a Roman town. In our municipal buildings a portion of undoubted Roman tessellated pavement is still doing duty as flooring for the entrance hall of our police courts, and the modern pavement has been laid to accord with the pattern of the ancient work brought to light in excavating the foundations of the building. From the time that William the Norman raised Rougemont Castle, as much to keep us citizens in order as for our protection, Exeter has always been noted for its loyalty to the Crown, and has both earned and acted up to the motto "*Semper Fidelis*," granted to it by Henry VIII., and still borne on the arms of the city.

You will see, gentlemen, that you have not come to a place without a history; that your welcome to it will be a right cordial one, I have no doubt.

Looking over the year since our last annual meeting at Brighton, I think there is one thing that deserves a passing notice, and that is the new regulations for the diploma of the L.D.S. of the Royal College of Surgeons of England, which took effect from January of this year. I have no intention of going through the alterations *seriatim*, but I think they are so important that they should receive notice at our hands on the first occasion of our meeting, since the Council of the Royal College of Surgeons has issued them. I think that we must all of us feel that it is a very great improvement to have brought the dental curriculum more into accord with the first part of that for the conjoint examination for the M.R.C.S. and L.R.C.P., thus placing the dental student for the first half of his studies on an actual level with the general medical student; a state of things to which all of us who have been giving attention to the promotion of dental education have always desired, and striven to attain and it will be no small assistance to students to be able to get their instruction in chemistry, practical chemistry and *materia medica* finished be-

fore taking up their hospital work. Thus increased facilities are given to students of our special branch of medical science, for more time can be expended at the hospitals in acquiring practical knowledge and mastering the details of anatomy and physiology, and the time that was formerly devoted to the study of chemistry and materia medica can now be advantageously spent in the pursuit of operative dentistry.

Passing from these points of grave interest to our profession, in which I feel sure our opinions are at one, to a matter that has of late much occupied my own mind, and that of at least some of my colleagues, I now desire to bring before you some considerations on the position of dentistry with regard to the public services.

This is a subject, as I have implied, by no means new to members of this Association, having been brought prominently forward on at least two occasions, more especially by Messrs. Cunningham and Fisher, with regard to which the Association has made strong representations to the authorities. The immediate object in view was to provide the needful attention in dental surgery for our soldiers and sailors; at all events in military centres, in naval hospitals and at naval stations—the result was, as we heard at Brighton, a rebuff from the authorities, of which many of us have still a lively recollection. I think, however, the time will come when something will have to be done, and in hastening on that longed for day, the creation of a public opinion on the subject will do much to assist this Association; and as I know that presidential addresses are read by many beyond those who attend the meeting to which such addresses are delivered, it has occurred to me to bring the matter again into “the fierce light which beats around” a president’s chair.

As I was returning from the Dublin meeting two years ago I found myself the joint occupant of a compartment of a railroad carriage from Birmingham to Bristol with a gentleman of long service and high rank in the medical department of the Royal Navy. In conversation with him we soon found out that we were not only engaged in practising kindred professions, but held the same views on the subject, and he told me that he had made an endeavour to bring the matter of dental surgery for the seamen and marines of our navy some four years since, before those in authority at the Admiralty, and he subsequently sent me the rough notes of his communication, from which I will make a few extracts.

The writer commences by pointing out that—"No department of the public service has made greater advances during the present century than the medical." And after contrasting the knowledge of the etiology and prevention of diseases shown by the medical service of the navy at the beginning of the century, with the knowledge possessed by the same service at the present date, says:—"So great have been these changes, so marked the benefits, that it might almost seem that no further improvements could be made." But is this so? he asks, "are we sure that we have done all in our power compatible with the nature of the naval service to prevent disease? Are there no means by which we can raise the standard of health, high as it is, of our seamen, besides those already now employed?"

He afterwards says:—"These reflections have led me to the conclusion that the teeth of the men are more worthy of attention than they have hitherto officially received." Here, then, we have the words of a distinguished surgeon of long service and high standing, emphatically pointing out the existing necessity for some attention to the dental health of our soldiers and sailors. Now as to the attention at present afforded to the relief of dental maladies in the Royal Navy he draws a graphic picture in the following words:—

"When serving in 1870 on board H.M.S. 'Warrior,' I was one day horrified by the sick berth steward producing two of Lazenby's pickle-bottles, one of which was full and the other two-thirds full of extracted teeth, which the man said he had extracted in ten months without the knowledge of the medical officers of the ship, and he was not a little proud of his achievement."

Here is a picture of pain and suffering that could be in a great measure prevented if skilled dental surgeons were attainable at certain periods of the seaman's service; and yet no mention is made of the long list of diseases that are frequently traceable to absence of teeth, as well as the presence of diseased and imperfect ones, such as chronic dyspepsia with all its attendant maladies, caused by insufficient mastication of food, to which may be added neuralgia, earache, ulcer of the tongue, and even epithelioma, odontomes, periostitis and necrosis of the maxilla, abscess, salivary fistula and empyema of the antrum; while constipation, diarrhoea, dyspepsia and debility are simple cases, with exceptions of cause and effect.

We know also that remote effects, traceable through reflex irri-

tation of peripheral nerves consequent on diseased teeth, may be transmitted to both motor and sympathetic fibres, so that mania has been reported as an accompaniment of cutting the wisdom teeth, and paralysis of arm, deafness, epilepsy and amaurosis have been found consequent on dental diseases and cured by the removal of the source of the mischief.

For the sake of common humanity then, how much better would it be for our soldiers and sailors if means could be found to remedy this by instituting a regular examination of their mouths and restoring the ravages made by dental caries before the disease has gone too far.

The author of this eminently humane representation to the naval authorities sent in the results of the examination by him of the mouths of 1,022 seamen, whilst serving at the Royal Naval Barracks at Sheerness, of men of from twenty to forty years of age, and an analysis of the tables he made showed that of the aggregate of 32,704 teeth that should be present, 1,030 were not cut, of the 31,674 remaining to be accounted for no less than 4,929 were either extracted or decayed, being rather more than one-seventh of the total number of teeth, and this considering the age and quality of the men, is strikingly large, especially when we recall the fact that the men enter the service as boys on board training ships, and that boys with more than five defective teeth are rejected; and as a fact in actual practice it is seldom that a boy passes with more than two or three diseased teeth at the time of entry. This amount of disease, therefore, has developed after their admission, and as the age for entry is from fifteen to sixteen years, those who early show marked tendency to caries of these organs, do not get into the service at all.

The result of these statistics, which are most exhaustive and the originals of which are in my possession, is to show that it is the molars, that is to say the most useful teeth, that are chiefly absent or diseased, and without disparaging the examination made by my medical friend it is possible that, had the examination of these mouths been made by a dental surgeon more mischief even than he noted would have been apparent.

Here we have the strongest possible case for extending to our Navy the means for combatting dental diseases. For only remember what the loss of such a percentage of the organs of mastication means to men, who need to be capable of showing

the greatest amount of hardiness, in fact the *Mens sana in corpore sano* in the very highest degree, in order to carry out merely the routine duties of every day work in every clime, exposed as they are to every extreme of weather from Arctic cold to Equatorial heat. Men, to meet such requirements, should be in the highest condition of physical training even in times of peace, how much more then is it the case in time of war? And how can men be in this condition who lack the primary means of the due assimilation of the food for the nourishment of their bodies, especially when, as must frequently be the case in long cruises, that food is of a character to require all the natural apparatus for digestion in good order to assimilate it at all?

The consequences of disease in these organs must be that men are invalided who should not be, if we bear in mind the great care that is taken in selecting men of the finest physique, at the age best calculated to resist the attack of disease of any kind, that is between the age of twenty and forty years.

The cost to the nation of turning out an official sailor, from the time a boy joins the Navy at one of the training ships at the age of fifteen, till he passes out two years later to sea-going craft and becomes at eighteen years of age an ordinary seaman—when his education may be considered complete, is not less than £100; so here there would be a great economy in endeavouring to preserve in health such expensive and valuable material as our blue-jackets undoubtedly are.

In making out a case for the soldier to receive dental attention, I have not the advantage of access to such a document as the report of the gentleman I have mentioned, but to begin with, the cost to the country of manufacturing the finished soldier from the recruit is no less than that of turning out an efficient sailor, for it is allowed every soldier costs the nation £100, whilst in the case of cavalry, engineers and artillery men, the cost is much more.

As far back as 1857 the then Director General of the Medical Department of the Army, Dr. A. Smith, issued a circular to the medical officers of the service, instancing the advances made in conservative dental surgery, and bore out the necessity of attention to this side of the men's health in the following words:—

“There is no occasion for me to enlarge on the important influence, advantageous or the reverse, as the functions of digestion and nutrition, which the sound or defective condition of the teeth exercises; and I need not dwell on the fact that their con-



servation is especially of consequence to soldiers, as their absence or defective condition found a very possible cause of impaired digestion, a consequent loss of health and moreover occasionally constitute a direct cause of inefficiency and unsuitness for military service."

Dr. A. Smith goes on to say:—

"I am of opinion that a considerable gain to the service, besides comfort to individuals, would accrue from a more improved practice in dental surgery than that which has hitherto obtained in military life."

I owe the following valuable remarks to a paper read by my friend Mr. Thomas Gaddes, before the International Congress of 1881, on dental surgery in the Army as existent then, and there has been no advance since. He says:—

"I need not set forth before such a meeting as this the relation of the teeth and the importance of dental surgery to the general health—these facts are too well known; yet in the face of these facts, the Army medical officers have not to receive, neither as a rule do they obtain, any instruction or experience in the treatment of the common and often very painful diseases of the teeth. Dental surgery is totally ignored and enters into no part of the special training required by the Army Medical Department. The result of this is that the non-commissioned officers and men of the British Army receive from the Army Medical Service as a whole such treatment as must from the nature of the case be far inferior to the skill in medicine, surgery and hygiene, displayed in the highest degree by members of that service."

And here I would say *en passant*, that dental operations require the expenditure of so much time that it would be impossible for the Army surgeon to effect them in conjunction with his other duties, were he ever so skilful.

Mr. Gaddes continues:—

"Where treatment of diseases of the teeth—from which of a certainty nine-tenths are sufferers—is not given by the Army surgeon, relief is not unfrequently sought and obtained at dental and other hospitals, maintained for the necessitous poor only. Furthermore, how many teeth are lost which might in these days of conservative dental surgery be saved? How much suffering before this loss, and also after loss, is endured by the brave-hearted for the want of the administration in the Army of an organised system of dental surgery? That there is a need for such an

administration all must agree, but the question how such is to be accomplished will require careful consideration."

I would suggest that, in view of the cost of producing efficient soldiers and sailors for the service of the country, on the ground of economy, to put forward no higher reason, it would repay the nation to add to the Staff of the Medical Departments qualified dental surgeons at all naval stations, at the naval hospitals, flag ships and gunnery ships, such as the "Excellent" and "Cambridge," where, in consequence of the men being drafted into them for special training, they are constantly at intervals changing the men, who would thus have the opportunity of passing under the observation of the dentist whilst on board, and for the soldiers in all army depôts and military centres and permanent army hospitals.

That this would entail a very slight outlay on the part of the nation in comparison with the gain that would accrue I have no sort of doubt, and the nation would be repaid over and over again by the increased length of time we should find the men serviceable. The statistics of work and cost of the same furnished by the reports of our dental hospitals show at what a comparatively little cost over and above the pay of such officers such a service could be maintained, for, commensurate with the benefits conferred, no medical charities cost so little, there being no expenses for maintenance of patients, and I assert that it would be a national disgrace if such an outlay were grudged by Parliament, even if the reasons for calling it into existence were humanitarian only, instead of being, as they are, eminently utilitarian and economic.

I feel some apology is due from me to the members of the British Dental Association for having selected for a presidential address a topic somewhat worn-out by repetition, but the subject is one that has been frequently brought home to me by the state of the mouths of soldiers who have presented themselves to me as patients at the Exeter Dental Hospital, and I trust its importance will be an excuse for my showing preference for it over a strictly scientific theme.

It only now remains for me to thank you for your kind attention, and to express the hope that what has been to you an enunciation of self-evident truths may be to the general public an urgent appeal for a wise and humane reform in those public services to which our country owes so much of its greatness.

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On the motion of Mr. FELIX WEISS, a hearty vote of thanks was awarded to the President for his address.

The PRESIDENT briefly replied.

Mr. J. C. OLIVER, L.D.S.Eng., then read his paper on "Conservative Dentistry; its importance as a National Institution," as follows :—

Mr. PRESIDENT AND GENTLEMEN,—Of all the numerous ills that afflict civilized nations, there is no malady so universal, none that causes such an aggregate amount of suffering and that so impairs and undermines the health of the people as those diseases of the teeth which, unchecked, end in their destruction and loss.

Could we but estimate the number of teeth annually destroyed by caries, the amount of suffering endured, the injury to health inflicted, we should be astounded at the magnitude of the proportions realised.

Instance the case of tens of thousands of the people of this country whose lives consist of one sad and mournful experience of suffering from childhood to early man or womanhood, and when their sufferings cease—forsooth, because their teeth have ceased to be—existence is burdened by the permanent disability of impaired mastication, with the numerous ailments that result therefrom.

The loss to the nation which the ravages of dental caries produces in its enfeeblement of the bodies and the destruction to the happiness of so large a proportion of its population, is a subject which would repay investigation by the State, and seeing that science has discovered the true specific for this disease, the problem of popularising Conservative Dentistry ought to be regarded as one within the sphere of practical politics. Not that I think the time has come when we are likely to see State appointments in connection with an Act making compulsory the periodical examination and treatment of the teeth of children—the millennial day has not yet dawned—but, however arbitrary or quixotic such a proposal might be considered, I am prepared to maintain that such a measure would be justified by the beneficial effects that would result therefrom, and such a proposal would rightly indicate the urgency and importance of the subject; for the present, however, we must be content with moral suasion as the means at hand for accomplishing the object of popular education.

In considering the relation of medical science to dental caries we may inquire, What has medical science done, first in discovering the predisposing causes of the structural weakness and defects in these organs of mastication, and next, what has been accomplished by it in correcting this defect of development?

Many are the theories guessed at as to causes, and many the suggestions offered for their counter-action, but in spite of all attempts in this direction the fact remains that the teeth of the young people of to-day are weaker in structure and more prone to decay than at any former period. No special hygienic *régime* as to diet can stand in stead of the simple, hardy bringing up of children in former days, when bone and muscle were formed in a manner as healthy plants are grown in open exposure to sun and wind and rain.

But if science has failed in this department it has been highly successful in checkmating and arresting dental caries in its course of destruction, for whilst no inherent weakness of the system is so certain and rapid in its final issues, no cure for human ills is so effective and thorough as that indicated by the science of conservative dentistry. Correctly applied, it, with few exceptions, practically accomplishes what it theoretically professes; in this respect it may be regarded as the most triumphant of all the healing arts.

Deplorable, then, as is the state of the teeth of the present generation, conservation processes scientifically and systematically applied may be said to be capable of preserving and maintaining in a state of usefulness every set of teeth of average natural construction; and, were the profession as wise and capable as its science teaches, and the people as prudent in the adoption of such measures as the value and importance of their teeth demand, the incidence of suffering and loss of the dental organs would be of rare occurrence and the necessity for artificial substitutes in early life exceptional.

Theoretically, then, it is possible to banish toothache, preserve the natural teeth, and largely do without these artificial aids to mastication. To make this practicable, it is required first that the dental profession be highly educated in scientific knowledge, in skilled manipulation, and above all, energised with true professional enthusiasm in the performance of its work. Correspondingly the popular intelligence requires to be awakened, first to understand the value and character of these organs, and

be taught to make the object of their retention a first rule of life, a necessary part of existence.

This education and appreciation of the people, you will agree with me, is a most important factor in dental practice, and must be regarded as the necessary counterpart to the education and training of the dental surgeon; for, to make the offices of the practitioner in any high degree useful the patient must be intelligently appreciative of the merits of our art, and must be instructed in those rules of periodical survey of the mouth so essential to the early discovery of disease and permanently satisfactory treatment of the same. Herein lies the great success of conservative dentistry as a system, and hereupon depends the spread and public adoption of the same.

Philosophers sometimes question whether those possessing the advantages of social position are happier circumstanced than those in humbler walks of life, but I think the culture and refinement of the upper classes here distinctly confers on them advantages in connection with their contact and appreciation of conservative dentistry which the poor in their ignorance and inability to procure are denied. Your experience will probably outbear my own, that the most assiduous care of the teeth is generally a mark of the highest natural refinement and social culture. The better classes of society are then the patrons, and these almost exclusively share the benefits of our most beneficent art. But I would ask, ought not measures so simple, so effective, so lastingly beneficial, and so necessary to the well-being of all, become a national institution, in the sense of being universally adopted by the people?

The great barriers that stand in the way of this adoption I think are three-fold, and consist of ignorance, prejudice, and indifference.

To illustrate the first, a short time since a working collier, who through many years had by means of stopping, preserved his teeth, drew from me the observation that I wished that all his fellow-workmen would exercise the same prudence and forethought as himself. His reply was, "They don't know nothing about it, sir." This exactly expresses the true condition of the mass of the people of England to-day. The national sentiment in regard to these organs is greatly lacking in tone and in marked contrast, even to that existing among the most uncivilised races. Instance the cases of the North American Indians, or the aborigines of New Zealand or Ceylon, who, after every meal scrupulously rub

their teeth either with the ashes of the camp fire or with some native root preparation. These traditional customs at least prove that they set a high regard on these instruments of pretension and mastication which contribute so much to the enjoyment of life and length of days of these savage races.

But whatever excuses there may have been for the stolid indifference of the people of this country in former days when the cure for caries was unknown, or if known, imperfectly performed, that age is now past, and with the general spread of knowledge which reaches everywhere, and to all, information and instruction upon this vital subject should be so organised that the old traditional notions should give way to more intelligent and hopeful ones, so that conservative dentistry may become as among the enlightened people of America, a national article of faith, and a means by which the population as a whole may be made happier, healthier and more vigorous as a race.

But whose is the duty and privilege of educating the people and assisting them to this acquaintance? As scientists possessing this technical knowledge, all light and leading must proceed from us. As individual practitioners we are doing and have accomplished much, but unitedly as an Association we have an influence a hundredfold more powerful than as private individuals. The British Dental Association as a body, representative of all that is worthy of respect in our profession, holds an unique and honourable position. Its opportunities, duties and responsibilities belong to it alone, and no other can fulfil them. Standing as the guardian of the interests of the profession, its foremost concern should be to see that that profession attains a position of usefulness as wide as the wants of the people. The exalted condition of dental education to-day has been brought about by the personal influence and self-denying labours of a few earnest and heroic workers whose names will live as long as dental practice lasts. Through their influence the profession has been raised from a state of almost degradation to one which commands universal respect. From our present standpoint we can even yet look back in memory into the dark ages of dentistry and mark the greatness of the work accomplished by them. Can we doubt that a body of educated practitioners created by them, if inspired by their spirit and emulating their example may not with equal success promote a system of popular education so desirable alike for the public weal and for the continued success and progress of our profession.

That this duty of concern for the public need has already been recognised by this Association is evidenced by the steps now being taken to procure statistics of the condition of the teeth of children of Industrial Schools and other public institutions, which when obtained it is to be hoped will be utilised to base some instructive popular facts upon, and were it possible for the Association to formulate for public use such simple wholesome rules as would prove a landmark for the guidance of parents and teachers in their care of the young and for all and every class who desire such information, I cannot but think that a declaration from so high and indisputable an authority would be valued not only by the public but also gladly hailed and accepted by the medical profession whose intelligent approval of such advice and their generous regard for the public good would be likely to prove the most effectual means of its transmission.

From knowledge obtained of the views of members of the medical profession as to the necessity of some scheme of popular education upon this important subject, I am constrained to believe that their views are somewhat in advance of our own, nor would they, I am sure, regard an honest effort on our part to influence the public in favour of a general adoption of conservative dentistry other than most favourably and in keeping with their own custom of openly giving expression to their views when the necessity of public health demanded.

The danger which many high in our own body have expressed lest such a *pronouncement* might be regarded as an infringement of true professional behaviour, or be construed by the public into a covert attempt at advertising, is no sufficient reason, why earnest convictions induced by daily contact with the people's needs should be stifled and made nugatory. The fearless pursuit of disinterested and high purposes will alone win for the dental profession that honourable esteem which attaches to noble deeds alone, and I would distinctly urge that the Association, to justify its right to this respect, should look beyond its own self-interests and take the people under their protecting care, and this the more becoming and incumbent, inasmuch as the nation has by the Dental Act conferred on the profession in Great Britain a charter of distinctive rights and privileges of great value.

To this end I would suggest that there should be a Committee appointed by this Association to enquire into the condition and requirements of the people and see whether measures for their

benefit may not be devised perhaps (1) by establishing a code of dental ethics which may be recognised as a standard for the guidance of dentists in the honourable conduct of their practice ; (2) by issuing a code of instructions for the use of the public in the care and preservation of the teeth ; (3) by instituting a system of instruction for the young of all classes ; (4) by urging the appointment of dental surgeons to public schools ; (5) and by indicating a popular system of conservative treatment which would be within the reach of the masses. Such a system I conceive to be possible, which whilst remunerative to the dentist, would be highly economical to the wage earning population.

Then there comes the difficult question of the treatment of the poor, which I think would be best met by the provident dispensary system. The Association has here before it a wide field for labour, which under generous cultivation will not only be an inestimable boon to the people, but which will do more to raise in public confidence and esteem and make increasingly prosperous, the profession of which we are members, than any and every means that we can devise for our own protection and advancement.

The PRESIDENT, in inviting discussion, said the paper was one full of self-evident facts.

Mr. GEORGE CUNNINGHAM said he thought a paper of the kind read by Mr. Oliver, following as it did upon an even more important address from the President, showed that the matter was one that did not merely concern the members of the Association, but that it was a matter of public interest. He thought it would be well for some one to say that if the members were silent it was because they had already discussed the question and not from lack of interest. They were convinced of the necessity of the things propounded. No thinking man, with the knowledge that he acquired as a dentist, could help feeling that the public could derive a very much larger benefit from their labours, the labours of the dentists, if their labours were applied at a different time. He thought the Presidential address and the paper read by Mr. Oliver all tended to show this, that they (the dentists) as an earnest body of thinking men, concerned not only in their own individual interests as a profession but also as members of a large community, knew that the best services of that profession were not being received by the public. And why? Simply because of their ignorance. It was a fact, he contended, that the dentists as



a profession were responsible for the ignorance of the public. The public could not educate itself. The Association had not, beyond the annual meetings, done anything to educate the public practically. There was a great difference in discussing the question with individuals and discussing it in corporation. Individually they agreed that something should be done. He thought himself that, when the suggestion was thrown out, that "a committee should be formed of the Association to consider certain specific subjects suggested by Mr. Oliver," that the members should not forget that only recently they had such a committee which was a representative Committee of the Association. He might observe that some thought something should be done and, he believed, could be done, but that at the present moment it was better that the individual should suffer rather than the Association should suffer in any way whatever. He had no lack of confidence as to the future, and he only regretted that the action he had taken had not been taken in the name of the Association.

He had endeavoured as far as he could to do some amount of work in the education of the public. He did not regret it. He meant to continue it, and his only regret was that he had not had an opportunity of asking the members of the Association in a more elaborate way to sympathise with the work. He maintained that Mr. Oliver had rendered considerable service by bringing forward the question of the necessity of the Association, as a professional body, doing something to remove that amount of ignorance which no doubt was the cause of the loss of a large number of teeth that might otherwise be saved; and it meant not only loss of teeth but impaired health.

Mr. FELIX WEISS said that what was most needed was some means by which the public might be able to distinguish between the charlatan and the true practitioner. Some time ago he instituted inquiries. He obtained the assistance of two very admirable ladies of prepossessing appearance, who made a point of visiting most of the dentists in London and some in the country—men of the advertising class, known to be disreputable and obnoxious to the community. He directed the ladies to take particular notice of the literature they offered to the public, and it was found that the literature on their tables contained sentences of literature which was written expressly to expose them. A great many schemes had been advocated by which the public might be informed. He had a little scheme which he hoped one day would

... sound like a wild scheme. He ... should approach the newspaper ... advertisements of quacks. He ... years ago a class of advertisements ... newspaper proprietors were ap- ... that no such advertisements con- ... that had no influence. He had ... of some London papers, and they ... which went a long way towards ... something in order to attain the end ... were not now able in the daily papers ... advertisement sent to them. If that was ... could easily fill their columns with other ... should they not leave out those advertise- ... to be nothing but lies, and disgraceful ... they appeared.

... said that after the remarks made by Mr. ... would be advisable to begin at the beginning ... the dentists') patients thoroughly while they ... and they could gradually go out to the ... patients. Let them get at heads of different ... they would like to get at and try to educate ... get at the Superintendents and Committees ... down in a friendly and specific manner. Mr. ... needed to refer to an institution at Ohio in connexion ... was called upon to perform certain dental work. ... make a friend of the Superintendent. He engaged ... conversation about conservative measures in dentistry ... measures. The institution he referred to was ... and the inmates presented themselves in all stages ... gravity. It was decided to try conservative measures. ... a great amount of cleaning and filling done. Febrile ... and general nervous derangements were allayed and ... to a great extent; in fact, febrile disturbances were ... the first year about 25 or 30 per cent., thereby showing ... of conservative treatment. He thought such papers ... read by Mr. Oliver would undoubtedly, if well looked ... acted upon, be productive of great good.

... KENDRICK said he was very sorry, personally, that the ... had not seen its way clear to take some steps in the ... indicated by Mr. Oliver. He thought that if a pamphlet

were printed and sent to all medical men on the register, giving certain information as to the preservation of teeth and as to what could be done by dental surgeons in the present day, it would be of great advantage to the public and to the dental profession. He was sure a large number of them were utterly ignorant as to what could be done, and would only receive with gratitude any suggestion coming from such an Association as the British Dental Association. There were large hospitals in large towns in England without dental surgeons on the staffs. He thought that if medical men were enlightened by pamphlets directed to them, it would open their eyes considerably as to the present system of dental surgery and what could be done.

Mr. FOTHERGILL said there were very few medical men in this country who did not know, personally, the benefits to be derived from the assistance of the dental surgeons. Medical men were among the constant patients of dental surgeons, and they must know, as a rule, what a very great benefit it was to have their teeth properly attended to. He thought himself that every dentist ought and must extend education on the subject spoken of, and must admit the necessity of attention to it. But he thought any attempt such as had been suggested to the Association as a corporate body would be very much like appealing to Government, as people were apt to do for all sorts of evils. In the majority of cases those appeals to Government generally ended in failure. He strongly objected to the Association taking the matter up in its corporate capacity.

Mr. J. HAY felt that the evil was one the members could not reach unless by following out the suggestions made by Mr. Oliver. He believed that the Association, as an individual body of dental practitioners speaking for the whole dental community, should adopt some means of bringing to the knowledge of the masses the necessity of their earliest attention to every kind of dental ailment. They would never reach the root of the evil through the efforts of individual dentists while engaged in their own practice, and never reach the masses who needed most the information which the Association might put before them. There should be popular literature which could be read by every father and mother in the community, showing the necessity of attending to their children's teeth at the very earliest opportunity. In that way the Association would reach tens of thousands, whereas it would only reach a few through the efforts of individual dentists.

He thought the Association should appoint a Committee to examine what means it could adopt as a body, of bringing before every parent in the kingdom the duty and the necessity of urgent attention being paid to the care of their children's teeth ; that they should not wait until necessity arises and until pain came. He would also suggest that the Association might bring its powerful influence to bear on the Board of Education, with a view to inducing the latter to adopt a system of careful inspection of all children who attended Board Schools. He (Mr. Hay) would have every child who entered a Board School pass under a careful dental inspection there. By those means they would reach immediately a very large body, and obtain an early control over the evil which they wished to remedy.

MR. FOTHERGILL : May I ask if it is to be paid for out of the pence of the children ?

No answer was returned.

MR. SMITH TURNER said the subject was one they had all the utmost sympathy for. They had also sympathy for those who were struggling to originate something that would meet the great evil ; but he must confess that the schemes he had heard propounded were very much like the schemes of missionaries, of teetotalers, and of those individuals who thought they were going to reform society by tracts and by advertising information, by telling people if they drank too much beer, gin and brandy they would be ill, and by telling people that if they did not go to a place where there was worship they would go to a place where there was no worship. The members of the Association were advised to educate their patients. It was like a parson preaching against people who did not go to church to people who were in church. The patient was with them ; he knew the value of the dentist's services. How were they going to educate him ? For his own part, he found he had plenty to do in performing his work without talking to a patient. He could not understand those gentlemen who talked so glibly about talking to patients and educating them. He believed something would be done ; something was in course of being done ; but that something must be done deliberately, systematically and slowly, and they must do it in a manner which would not expose the Association to ridicule, and above all, which did not supply the quack and charlatan with the means of over-reaching the Association.

MR. MORTON SMALE said he agreed with every word Mr. Smith

Turner had said, and he hoped the British Dental Association would never condescend to issue circulars. The Association might issue circulars, but it could not make people read them. If the Association sent circulars to medical men he was certain they would all put the circulars into the waste paper basket.

Mr. OLIVER, in replying, said that when he wrote a paper he generally had some reasons for writing it. He generally had some grounds to dwell upon, and he did not go in for impossible schemes. He thought the members of the Association would find that what he had written in his paper was a possibility, if not this year it might be in the next ten years. The Association occupied a position of influence. They had responsibilities, and he thought it was their duty to fulfil them. What he suggested was this—that they who knew should put their heads together and formulate a code of simple rules which they knew to be so necessary to the welfare of the public. And if the members did not agree as to publishing them, let them be kept in the archives of the Association if necessary. At any rate, they might be used with discretion. He would not have it said that the British Dental Association was an advertising body, and that the members were issuing pamphlets to produce business for themselves. He wished anything that might be done should be done in a disinterested way and for the benefit of the public. There was a thing which he desired to see established, but the mention of which had not caused discussion, namely, a code of ethics for the use of dental practitioners. He simply reiterated it as a very needy thing, which the Association might do well to have. There was such a code in the medical profession, and he thought the dentists might well have one in connection with their profession.

Mr. G. G. CAMPION then read the following paper on “The Need of a Higher Qualification in Dental Surgery”:—

GENTLEMEN,—No one I imagine would be hardy enough to maintain that we have as yet arrived at perfection in our system of dental education, but upon the deficiencies which exist in that system and the means whereby they are to be remedied a difference of opinion exists; some contending for a gradual extension on the lines of medical education—an extension ending perhaps ultimately in the compulsory acquisition of a medical diploma; while others would embody those parts of medical study which would be of use to a dentist, but which are not now in-

He thought the Association should examine what means it could adopt to separate a scheme for a higher license in its present form as every parent in the kingdom the duty of. And in the short comm-attention being paid to the care of the people, I propose to ask they should not wait until necessity, which, as it seems to me, point He would also suggest that the Association affording the best solution. ful influence to bear on the Board of higher education of dentists. inducing the latter to adopt a system of general and specialty of general children who attended Board of Health needs arguing at the present have every child who entered the school prepared to readily and gladly a careful dental inspection the day after. A hearty general assent to the reach immediately a very large number of them in other surgical specialties, over the evil which they wished to remove exclusively to one particular depart-

Mr. FOTHERGILL: May I ask in the first place qualify himself pence of the children?

No answer was returned. The question of surgery as a whole. Indeed in

Mr. SMITH TURNER said in regard to this rule. If, for example, the utmost sympathy for the poor, a world in which dental disease who were struggling to get on, was confined mostly to the wealthy classes, the great evil; but he thought the influence was common to all classes heard propounded were the conditions which might aries, of teetotalers, and the people should even to demand that before a man were going to reform society, they should possess a medical in addition tion, by telling people that if they did not possess a medical in addition brandy they would be ill. We, however, in a matter of this kind not go to a place where the conditions which are possible only in a place where there was a disease here and now; and in the widespread ciation were advised to consider and conform to those a disease afflicting as it does the poorest as parson preaching against the inadequacy of a medical education, people who were in the world, and any instruction in the ordinary and knew the value of the dentist; together with the long and exacting educate him? For the mechanical nature of our work, performing his work, the double qualification compulsory, we understand those who are the justification of the singular and some- to patients and education assigned to us by the Dentists Act— be done; something entirely separate and distinct profession carry- thing must be done in the specialty of surgical practice.\* they must do it in the specialty of surgical practice.\*

There is a remarkable article by Mr. Morton Smale in the Journal, in which, after discussing the relationship between dentistry and surgery, he comes to the conclusion that dentistry is a separate and distinct profession, and that the education of dentists should differ from that of surgeons.

in the increasing prevalence of dental caries, the more and complicated means adopted for its treatment, and the strengthening and elaboration of the medical curriculum, reasons which led to the Dentists Acts are yearly becoming stronger. They are not of passing, but of perpetual and increasing weight. I see, therefore, no grounds for the belief, and no justification for the hope, that at some future time in the history of our profession a medical qualification will become compulsory. Such a change can only be effected after a repudiation alike of the letter and spirit of the Dentists Act, and any suggestion of the kind has, at a meeting of this Association, only to be mentioned to be summarily dismissed.

II. But it may be said that if for these reasons it is unlikely that a medical diploma will ever become compulsory for dentists in this country, yet that as, with the lapse of time, our advance in status and other influences draw a larger number of able men to our ranks, so will the number of those increase who, being unsatisfied with the course of study for the dental license, seek in the acquisition of a medical diploma a deeper and more comprehensive knowledge of medicine and surgery. Here then rises a point to which I would ask your attention for a moment, viz., as to how far under existing and prospective regulations a medical qualification is calculated to meet the laudable aspirations of those dental students who seek after higher professional knowledge and attainments. And in considering it very briefly I do not propose to question the *desirability*, but only the *possibility* of a dental student properly acquiring such a qualification. The advantage I readily admit. It gives a man a broader view of his specialty, a firmer grasp of the principles of surgery on which our practice is largely based, aids him in the diagnosis and treatment of exceptional and difficult cases, and gives him a higher professional status in the eyes of his medical acquaintances. But its advantage to a dentist is one thing, and the possibility of its proper acquisition in a reasonable time by an average dental student quite another. And in considering this latter point it is necessary to examine briefly certain past and pending changes in the medical curriculum and examinations, and see their bearing upon it. Now undoubtedly the most striking if not the most important

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that of medical men, save that they should receive the special training in dental surgery and mechanics that is necessary to make them good useful practitioners of their calling."



...late years is that effected by the ... medical and surgical diploma before ... change which, coupled as it is with ... examinations by the General Medical ... the difficulty of obtaining a place ... first, indeed, it was thought by some ... not materially affect those dental students ... medical qualification; that the latter was ... more difficult to obtain, but that the ... simplified.\* But three years' experience ... necessitated a modification of this sanguine ... year we find Mr. Morton Smale saying that ... conditions it was "very easy, or comparatively ... take his M.R.C.S. and L.D.S. degrees; but ... new condition of things, it was exceedingly ... to take the conjoint examination."† Now I ... be guilty of any exaggeration, and will, therefore, ... any opinion of my own, unreservedly accept ... of a man who not only is possessed of ex- ... opportunities of forming a correct opinion on the ... being perhaps the most earnest and consistent ... of the double qualification, will be acknowledged by all ... likely to magnify the difficulty of obtaining it.

... the difficulty thus impartially attested may show itself in ... three ways: by a diminution in the relative number of ... students taking the double qualification; by the necessity ... a longer time to the work of the combined curri- ... by the neglect of part of the work if the whole is ... in too short a time. With regard to the first of these ... it was stated in the leading columns of the Journal in June ... since the conjoint scheme came into force the number of ... students taking a medical qualification had (at any rate at ... the Dental Hospital of London) become relatively smaller; and ... also be noted in this connection that it is not an unheard ... for men to begin the work for the conjoint diploma, get ... by the difficulty of obtaining it, and finally give up ... accept.

... the question of the time to be devoted to the work is of

\* *Transactions*, Annual Meeting, British Dental Association, 1886, p. 40.  
† *British Dental Association Journal*, vol. x., p. 462.



the very first importance. The dental curriculum is practically divided into two parts—the apprenticeship and the hospital portion—and it is found impossible to take the second part of the dental and the whole of the medical curriculum in the minimum time of four years without serious detriment to one or the other. It is indeed obvious that this must be so, since if four years are requisite for the medical curriculum alone, the addition of two years' dental hospital practice and seven courses of special lectures must lead, if attempted also in the same time, to the neglect of some part of the entire course; and it is not denied that men who do attempt to complete these parts of the combined curricula in this period only succeed at the cost of the practical work at the dental hospital; that the demand upon their time is so great as not to permit of such frequent or lengthy attendance as is possible for the man taking only the shorter curriculum for the dental license; that this particular part of the curriculum is in fact materially reduced. It is no answer to say that those taking the double qualification are invariably the most clever men, and that, therefore, a diminution of their time at the dental hospital will be of less moment than might be the case with others. That contention, whether true or not, is irrelevant unless it can be clearly shown that intellectual ability and mechanical aptitude invariably go hand in hand; that the man who sedulously cultivates his mental powers is unconsciously at the same time training his fingers—that, in short, the courses of training for mental and mechanical work are nearly or quite identical.

It is necessary, however, to have some standard or criterion by which to judge of the additional time necessary for the adequate completion of the double curriculum, and this may be found in a letter by Sir John Tomes, published in the *British Medical Journal*, in March, 1880, and reprinted the following month in the *Monthly Review of Dental Surgery*, where he says:—"It [*i.e.*, the dental curriculum] requires that of the four years devoted to professional studies, two shall be given to dental hospital practice; practically, that the mornings of two years shall be devoted to one part of the required technical knowledge—the acquirement, under competent teachers, of manipulative skill in operating upon the teeth, &c., and it cannot be rightly contended by competent practitioners that less time will suffice." Judged by this standard it is impossible to resist the conclusion that seven years is at the very lowest estimate the minimum which must be spent in the

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difficulty can only be really met by the establishment of a higher dental qualification.\*

III. It has been stated as a weakness of the dental license and a limitation of its curriculum, that a man who possesses it alone may be ignorant for example of such simple surgical knowledge as is required to dress a wound in the leg; and although this remark is open to the obvious if somewhat superficial objection that a dentist is never required to perform such work, and that, therefore, the ability to do so is unnecessary for him, yet it does, I think, give expression to a feeling which exists in the minds of many of us—the feeling, namely, that in a more ideal dental curriculum than we possess at present an extension might advantageously be made on the side of general medicine and surgery. The argument which has been deduced from the undoubted fact mentioned is the desirability of a dentist acquiring a medical diploma, but the conclusion which I draw from it is a very different one. I have shown that the conjoint diploma is beyond the reach of all but a few dental students, and though there are serious and obvious objections to the extension suggested in a *compulsory* curriculum which is already sufficiently inclusive for one of four years' duration, there can be none to embodying it in the curriculum of an *optional* diploma framed on the same lines as the dental license but requiring a wider and deeper knowledge of the same subjects. If, therefore, it is desirable that a deeper knowledge of surgery should be more widely diffused among dentists, this can be better effected by affording facilities for its acquisition in a higher dental qualification than by perpetuating the present restrictions which limit it to a comparative few—restrictions involving not only a large additional outlay both in time and money, but necessitating also the acquisition of a mass of information which, however desirable from an ideal point of view, has for the average dental practitioner absolutely no practical bearing on the actual work of his daily life. An effort directed to this end should command the sympathy and support of all—of

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\* The resolution recently passed by the Medical Council which formed the subject of an adverse article in the leading columns of the Journal for June last, seems a candid admission of and a real attempt to meet the difficulty above noticed; and personally I find it difficult to see why the suggestion it embodies should be repudiated. But the argument for a medical qualification has evidently of late shifted its ground. Formerly it was urged as a means to a wider and deeper knowledge; now it takes the different and less intelligible form of a desire to be on the Medical Register.

acquisition of the double qualification, if a diploma and every branch of his professional education. such of a future

In considering, however, a question practically been would be short-sighted and foolish to limit having obtained a present. The future, too, may well of the full, should be moment; and in the series of resolutions knowledge implied ing of the General Medical Council different circumstances will or no, the foreshadowing of a time undesirable to acquire medical curriculum will be extended fi

when, consequently, on the computation of general medical required to obtain both a dental license would be incomplete will, if thorough justice is to be done, of purely dental sub-increased to not less than eight years practical dental work. We that the resolutions referred to be practical. In educational that they are, as they stand, in line of the modern side of our authorities; and that it may be of schemes of commercial come actually into force. That dental certificates, and in the long period in the history of a the development of technical matter which is largely of future nearer home, in the recent sidered wise to leave wholly out of the General Medical Council, though inoperative for the present the report of the Education

To me, then, it seems, the resolutions are based. We, too, in omitting all consideration of be influenced by this spirit, suited to meet the want of general study shall go hand in students; but that the difficulties of acquirement, and remembering difficulties already great, and for a medical man is not of—are such as to damp the dentist. It is here that a medical but those with the very seriously deficient. It is on this energy. The medical profession may supplement, it can never be which is now taking place for qualification in dentistry.

University, will not allow of a basis—exactng a deeper know-inherent severity of the and surgery, a more intimate acquaint-but a few medical students, and a more thorough ability in with an additional of different parts fitly co-ordinated, and time and money are be within reach of a student of average but a few dental students may five years' serious study—a higher tions is to offer a study be welcomed by many. It would fill a place barriers in it our educational system. It would be a of the difficulties in dental students who at present have perforce

dent diploma the dental license; and since it would those who desire, and used as a stepping-

on, we should under its influence we are now to the singular spectacle too often happens that the higher the greater are the chances of his efficiency in those delicate and difficult surgical operations for the practice of which he is trained and for which alone it exists.

However, the advantages which might be derived from the adoption of such a scheme as I have proposed, be a fatal error to limit our view to the direct benefit in candidates for and obtainers of the higher qualification proposed. Scarcely less important would be the benefit both in the stimulus imparted to the teaching at the dental hospitals and the higher professional, and perhaps to the whole of our profession as a whole.

The higher qualification providing as part of its examination a more extensive test of a candidate's practical ability in all branches of a dental work, the need of more effective teaching would at once be felt; and this would react directly on the dental hospitals to improve the practical side of the instruction given at them to be more exclusive, more systematic, and more thorough. But this improvement of teaching, though necessitated only on behalf of those seeking the higher qualification, would benefit all dental students alike, and so distinctly tend to raise the standard of dental work throughout the entire profession. It is owing to their being so essentially practical that our American brethren have been enabled to effect so much in the development of dentistry as an art. Surely then we cannot afford to regard with indifference a measure which is calculated not merely to deepen the study of the scientific principles on which our work is based, but also to stimulate the practical side of our education and increase the utility of our profession.

Nor is this all. There can be little doubt that practising, as we do, a branch of surgery, brought thereby as we are into close relationship with the medical profession, and bearing in mind the deservedly important and honourable position which that body holds in our social system, the public estimate of our position and attainments will depend in some measure on the view which medical men form of our professional culture and ability. Indeed, we have been told on very high authority that, incidentally at any rate, one of the functions of this Association is to educate the medical pro-

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... and aims of modern dentistry.

... likely to think very highly of our

... so long as the only dental qualifica-

... acquaintance with those subjects

... to base itself, that they have, in order

... its highest sense complete, to be sup-

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... drafted on the lines above sketched, will

... requirements in this direction, enable its

... medical men on more equal terms; to take

... because possessing a wider and deeper know-

... general medical interest, and so tend to show

... dentistry is actually in practice what it professes

... of a calling of more or less educated mechanics,

... no mean or unimportant branch of medicine

... whole.

... now, briefly, to indicate one or two salient facts,

... seems to me, point definitely to a higher dental

... as an urgent need for our profession at the present

... the method of treatment adopted is essentially in-

... of course, obvious. It arbitrarily isolates and exclu-

... with but one, and that a small portion of the entire

... leaving wholly out of consideration two others of

... greater importance, and certainly greater interest. First,

... enter a qualification such as the conjoint diploma, which

... on the dental license not merely in degree but in kind,

... so constituted that the additional knowledge implied by its

... tion is useless to an average dentist in 95 or more per

... of the cases he is called upon to treat, can rightly be

... as a higher qualification in dentistry at all, any more

... a degree in pure science is looked upon as a higher qualifi-

... in medicine; and, secondly, it omits all consideration of

... scope and depth desirable for the higher curriculum, content

... simply with indicating the general lines on which the proposed

... advance should be made. Into the first of these points it seemed

... unnecessary to enter, since if it can be shown that a medical

... qualification is rapidly becoming unattainable for dental students,

... inadequacy need not be discussed; and the second falls naturally

... somewhat outside the title of this paper, and must, in any case,

... have been reserved for later and more serious consideration.

I am not sanguine enough to imagine that the proposal now

laid before you will at present meet with general acceptance. Opposition to it has been, indeed, already foreshadowed, but much of this, I think, will ultimately prove due to the fact that at present we are passing through a period of transition, in which we have not yet as a body learnt to face the last consequences of the principles adopted in the Dentists Act, and halt with perhaps a pardonable, though certainly an illogical, tenderness between premiss and conclusion. If the exigencies of dental education demand a special curriculum and special diploma, not less do those of a higher education for dental students require a higher special curriculum and higher special diploma. The course of study for our profession has been, rightly as we think, framed on its own peculiar lines. We must seek, then, to extend and develop it on those lines, not simply and precisely on the lines of medical education; and just in so far as we fail in this we shall fail in our duty not merely to future students and practitioners, but—and this is of infinitely greater moment—to the public for whose benefit our profession was formed, and for whom alone it primarily exists.

Let us then cease to speak and act as if the future status of our profession depended on the proportion of our students who take medical qualifications, for certain it is that with the ever-increasing severity of the medical examinations, and the inevitable lengthening of the curriculum at no distant date, the number of men able and willing to spend the necessary time and money in their acquisition will in the future become relatively less. Not on this but on the culture and attainments of our profession as a whole must our position as a body ultimately rest, and it is with a confident belief that a higher dental qualification will tend in some degree to advance that culture and quicken those attainments that this proposal is offered to-day for your earnest consideration.

Mr. MORTON SMALE opened the discussion. He complained of the way in which Mr. Champion had selected from his writings and speeches certain passages and taken them from their context and made him appear to advocate that which he could not advocate. It was not fair to take one or two paragraphs out of his speeches or addresses and quote them as his view of the whole question. Proceeding, Mr. Smale said he considered that no man should practise dentistry without the dental diploma. He had never advocated any other course. Ever since he had been able to think

fession in the scientific position and aims of modern medicine. But medical men are not likely to think very highly of our specialty or our profession so long as the only conditions exact so slight a practical acquaintance with the science on which dentistry professes to base itself, that they can make our education in its highest sense complete. It is complemented by the acquisition of a medical diploma. A dental qualification then drafted on the lines of a medical one by strengthening the requirements in this department, would enable possessors to meet medical men on more equal terms. It would give a greater interest in, because possessing a wider knowledge of, cases of general medical interest. It would show more clearly that dentistry is actually in practice, and is not content to be in theory, not a calling of more or less importance, but a branch, and no mean or unimportant branch, of the Science of Surgeons and surgery as a whole.

I have tried now, briefly, to indicate the reasons why, when established it which, as it seems to me, point to the need of a more thorough examination, and only a dental qualification as an urgent need for our profession in the first part of their time. That the method of treatment, and an additional diploma complete is, of course, obvious. It is only diplomas they multiplied, and they multiply, and that is the name, and began to mystify the question, leaving wholly out of the account the possibly greater importance, and the greater professional profession was beginning as to whether a qualification such as these sacred letters L.D.S." It differs from the dental license not in the multitude of diplomas in and is so constituted that the admission of the weaknesses of that acquisition is useless to an avowed dentist. The diplomas were signified by nearly cent. of the cases he is called upon to treat. He should think the dentists wanted a re-regarded as a higher qualification in their department. He guaranteed a degree in pure science, and went into the street, collected the cation in medicine; and, selected and asked them which was the the scope and depth desirable of the Royal College of Surgeons, simply with indicating the name of the Society of Apothecaries—they advance should be made, and as the general public was concerned, unnecessary to enter, since the diploma would be valueless. The members qualification is rapidly becoming a thing of the past in dentistry, and the proposal made its adequacy need not be questioned in the present L.D.S. He should be somewhat outside the limits of the present L.D.S. which would cast a slur on the old has been a perfect diploma let them make the nine to say make it so perfect that hardly



to create another sign by which they did about the education. I like to hear that sort of thing from the members of the profession, and that was to perform, and that was to perform, and they had no business, profession or the public. Let dentists, because of their own profession, his guide and rule should be, self-sacrifice. He did not see who was to be benefited, and the College of Surgeons he was quite sure that their examinations should not allow any incompetent men taking their part in the teaching of the schools would make the requirements of the diploma in schools was immediately raised. The medical schools of London had been raised and the standards of the Medical Board were very much higher than in former days. If the curriculum or examinations were perfect, get them made perfect. By all means give additional diplomas, not higher diplomas. He encouraged men to take additional qualifications, not only the R.C.S., but any other qualification, whether in science, literature, or in any department which pleased them, as the way in which he thought they would place themselves on the high pedestal on which they all wished to stand. For the first two years of a dental students' life he thought they should be on the same lines as a medical student. He should not expect a dental student to be obliged to pass the first and second examinations for the conjoint diploma. He believed it was a very good thing to require this, and it would show that dental students knew their anatomy and physiology. Then they should be allowed to take their course of special study; and afterwards when he had got his L.D.S. he wanted to finish his curriculum he could do so in two, three, or more years as he chose. He knew several men in London who had been working hard and practising hard while passing their final examinations. His advice was pretty plainly printed in the Calendar of the Dental Hospital of London, and he did not want to go back from it. With regard

to the question of expense, Mr. Smale pointed out that it was the rich students who were content with the L.D.S. It was the rich students generally whom he had to urge at the school to bestir themselves. It was almost always the poorer students who took the conjoint diploma in order that they might get a good position in their profession.

At this point, it being five o'clock, the meeting adjourned until the following day.

#### SOIRÉE AND DANCE.

In the evening there was a *soirée* at the Albert Memorial Museum, given by the President of the Association and members of the Western Branch.

The following were among those who accepted invitations for the *soirée* :—The Rev. P. L. D. and Mrs. Acland, Mr., Mrs. and the Misses Andrew, Mr. Andrew, Mr. and Mrs. William Ash (London), Miss Adlain, Mrs. and the Misses Ashworth, Mr. Henry J. Albert (London), Mr. W. R. Ackland (Clifton), Mr. E. Apperly (Stroud), Mr. and Mrs. J. M. Ackland, Dr. George Abbot, Dr. Blomfield, Dr. and Mrs. Budd, Mr. and Mrs. A. Burch, Mr. W. Brown, Dr. W. T. Bayne, Mr. E. Brown (Barnstaple), Dr. and Miss Black (Torquay), Major and Mrs. Breame (Newton Abbot), Mr. and Mrs. C. Bell, Mr. and Mrs. Bowden (Stevenston), Archdeacon and Mrs. and Miss Barnes, Mr. and Mrs. Bagg, Mr. and Mrs. A. Buckingham, Mr. and Mrs. E. A. Brash, Mr., Mrs. and the Misses Bennett, Captain Bedingfield, Mr. and Mrs. H. M. Body (Crediton), Mr. A. J. Barton (Lympstone), Mr. W. H. Barton (Lympstone), Mr., Mrs. and Miss Barton, Mr. and Miss de Winter Baker (Dawlish), Mr. F. H. Balkwill (Plymouth), Dr. and Mrs. M. L. Brown, Mr. and Mrs. C. Browne (Scarborough), Mr. H. O. Browne-Mason, Mr. and Mrs. Browne-Mason, the Misses Browne-Mason, Mr. and Mrs. Beal, Mr. W. Burt and friends, Mr. E. Bartlett (Caversham), Mr. and Mrs. Boundy, Mr. R. T. Campion, Mr. and Mrs. H. F. Carr, Mr. Ben Cleave, Mr. Henry Campion, Major, Mrs. and the Misses Courtenay, Mr. and Mrs. W. S. Croote, Mr., Mrs. and Miss Carter, Mr. and Mrs. Wilson Caird, the Misses Caird, Mr. and Mrs. G. Tucker Clapp, Mr. and Mrs. Cecil Clapp, Mr. and Mrs. R. Cumming, Dr. Clapp (Exminster), Mr. Russell Coombe, Mr. Fred Cowton (London), Mr. Fenn Cole (Ipswich), Mr. W. Cox, Mr. D. Cameron (Glasgow), Mr. G. G. Campion (Manchester), Mr. W. F. Cornelius

the Misses Clarke, Mr. J. Crocker, Mr. d-Cooper, the Rev. and Mrs. and Miss n), Miss Cunningham, Miss M. E. Crowley, Colwill (Ilfracombe), Mr. Dallas, Mrs. Dene, Miss Drake, Dr., Mrs. and Miss Deas, Mr. and n., Mr. and Mrs. Depree, Mr. and Mrs. Daw and Mrs. M. de C. Dickinson (St. Leonards), yer, Mr., Mrs. and the Misses Ellis, Mr. and Mrs. ulterton), Dr. St. George Elliott (London), Mr. Elkin, Egan (Cork), Mrs. Walter and the Misses Fursman, Mrs. Forrest, Miss Ford (Yarcombe), the Rev. and Mrs. ker, Mr. A. M. Foweraker, Mr. S. Bevan Fox, Mr. and W. B. Fulford, Miss Flood, Mr. A. Fothergill (Darlington), Wm. Fothergill (Darlington), Mr. R. Medley Fulford, Mr. add, Mr. and Mrs. Gratwicke, the Rev. H., Mrs. and Miss rimaldi, Mr. Grenfell Granville (Rugby), Mr. and Mrs. W. F. Gear, Mr. and Miss Gray, Mrs. and Miss Garland, Mr. and the Misses Glanville, Mr. and Mrs. J. B. Gould, Mr. H. Gould, Mr. and Mrs. Grogan (Torquay), Mr. and Mrs. Garland, Mr. Walter Glaisby (York), Mr. and Mrs. Alverstone Gabell, the Rev. C. and Mrs. Geare and friend, Mr. De Courcy Hamilton, Mr. and Mrs. and the Misses Harding, Mr. and Mrs. Delpratt Harris, the Rev. C. M. Hawker, Mr. and Mrs. Hawkins, Mr. and Mrs. T. H. Hepburn, Mr., Mrs. and Miss Hayward, Mr. H. W. Hooper, Mrs. E. Hamworth and party, Mr. Holmes A'Court, Mr. Percy Harding, Dr. and Mrs. Henderson, the Misses Holmes, Mr. and the Misses Hake, Mr. Hubert Hamlin, Dr. and Mrs. Harvey (Plymouth), Mr. S. G. Harding, the Rev. and Mrs. Arthur Hamilton, Mr. and Mrs. Holden, the Rev. Canon Hobson, Mr. Hexter, Mr. and Mrs. Seymour Hare (Chichester), the Rev. W. and Miss Hope (Wellingborough), Miss Hayman, Mr. and Mrs. Harry Hems, Mr. David Hepburn (London), Mr. Morgan Hughes (Croydon), the Rev. J. and Mrs. Ingle, Mr. and Mrs. S. Jones and family, Miss Janson, Mr. and Mrs. J. K. Johnson (Teignmouth), Mr. W. L. Jones, Mr. and Mrs. H. M. Imbert-Terry, the Misses D'Arcy Irvine, Mr. E. M. Jamieson, Mr. and Mrs. W. H. Jackson (Crediton), Mr. Alfred Jones (Cambridge), Mr. and Mrs. Spencer James, Mr. W. L. Jefferson (Bradford), Mr., Mrs. and the Misses Knapman, Mr. J. S. King, Mr. J. Knapman, Mr., Mrs. and Miss King, Mr. and Mrs. A. Kendrick (Taunton), Mr. T. E. King (York), Dr. and Mrs. Kempe, Mr. and Mrs. Kirby

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Mrs. J. T. Llewellyn (Sandhurst), Mrs.  
 Exminster), Mr. R. H. and the  
 and Mrs. and the Misses Loxmore,  
 Admiral R. Luxmore, C.B., and Mrs.  
 Lockwood, Mr. A. Lucas, Mrs. and Miss  
 (Cambridge), Mr., Mrs. and the  
 Miss Mommson, the Misses Mason (Pign-  
 Miss Weir), Mr. and Mrs. May (Fortes-  
 Mr. and Mrs. H. W. Michelmores, Colonel  
 Mr., Mrs. and the Misses Munk, Mr. H.  
 Mrs. A. Mackay, Major and Mrs. Mortimer,  
 Misses Mason, Mr. and Miss Moresby, the  
 Mrs. Menhinick, the Misses Mortimer, Mr.  
 the Rev. W. G. Munk, Mr. W. May, the  
 in Regimental District, Mr. John Mortimer, Mr.  
 (Crediton), Mr. and Mrs. W. Mathew, Dr.  
 (Crediton), Mr. and Mrs. Moone, Mr. McArthur  
 Mr. R. May, Mr. and Miss Mathew (Heavitree),  
 Mallet, Mr. G. C. M. Millet (Crediton), Mr. G.  
 (Hereford), Mr. W. J. Mason and Miss Mason  
 and Mrs. Mundell, Mr. J. A. Mallet, Mr. Henry  
 A. Mason, Mr. R. P. Morrison (Barnstaple), Major  
 S. and Miss Morrish, Mr., Mrs. and Miss Osmond,  
 Oliver (Cardiff), Mr. and Mrs. Powne, the Misses  
 Mr. and Mrs. Pring, Mr. and Miss Pickering, Mr. and  
 Mrs. Pocknell, Mr. T. C. Pring, Mr. and Mrs.  
 Pope, Mr. R. S. Pasmore, Mr., Mrs. and the Misses  
 Mr., Mrs. and Miss Steele Perkins, Mr. J. F. Pink  
 (Crediton), Mr. J. B. Paynter, Mr. and Mrs. A. Steele Perkins,  
 and Mrs. Pople, Mr. Perry, Rev. E. A. Pearse, Mrs. and  
 Misses Pearse, Mrs. Hunt Roberts and friend, Mr. and Mrs.  
 Roper, Miss Roper, Mr. and Miss Rogers, Mr. Harry  
 Mr. and Mrs. Rookes, Mr. and Mrs. Lionel Roberts, Mr.  
 and Mrs. W. C. Richards, the Rev. T. Russell (Barnstaple), Mr.  
 and the Misses Ross, Mr. Rilot (London), the Rev. W. T.  
 A. Radford (Down St. Mary), Mr. Reginald and Lady Roberts  
 (Exmouth), Mr. Frederick Rose (Guernsey), Mr. S. G. Reeves  
 (Dublin), Captain and Mrs. Swinton, Mr. T. Snow (Mayor of  
 Exeter), Miss A. M. Sirker, Mr. and the Misses Somer, Mr. J.  
 Edgell Searle, Mr. H. Simple (Budleigh Salterton), Mr. and Mrs.  
 Schuler, Captain, Mrs. and the Misses Sproule, Mr. C. J. B.

Sanders, Miss Nellie Symons (Totnes), the Rev. F., Mrs. and Miss Sterry, Mr. and Mrs. William Snow and party, Mr. and Mrs. H. Oke Smith, Mr. and Mrs. T. B. Steele and family, Mrs. Searle, Miss Sawtill, Mrs. and Miss Symmons (Topsham), Mr. W. T. M. Snow, Mr. Gerald Sharp, Mr. R. Winter Sharp, Mr. James Stocker (London), Miss Temple, Mr. G. Gage, Mr. J. J. H. Sanders (Barnstaple), Mrs. and Miss St. Aubyn, Mr. Alfred Smith (London), Miss M. Stollard, Mr. and Mrs. Smith, Mr. H. D. and the Misses Thomas, Dr. Raglan Thomas and Mrs. Thomas, Mr. and Mrs. Tosswill, Mr. and Mrs. F. Townsend, the Mayor of Totnes, Mr. C. J. Tait, Mr. and Mrs. Langdon Thomas, Mrs. J. T. and Miss Tucker, Mr. H. Tennant, Mr. J. Collins Tippet (Torquay), Mr. and Mrs. George Townsend and family, the Misses Tothill (St. Mary Tedburn), Mr. A. S. Underwood (London), Mr. H. B. Varwell, Mr. and Mrs. Peter Veitch, Mr. and Mrs. Vanderpant (Kingston-on-Thames), the Rev. J. B. and Mrs. Williams (Countess Weir), Mr. and the Misses Warren, Dr. and Mrs. Woodgates, the Rev. P. and Mrs. William (Rewe), Dr. and Mrs. Woodman, Mr. and Mrs. Ware, Sir William Walrond and the officers of the 1st V.R. Battalion, Admiral White, C.B., and Mrs. White, Mr. H. C. Ware, Mr. and Mrs. Arthur Ward, Mr. Felix Weiss (London), Mr. W. J. Wippell (Alphington), Mr. and the Misses Wippell, Mrs. Woodruff, Mr. and Mrs. Willey, Mr. C. Williams (Leamington), Mr. Cecil Williams (Croydon), Mr. and Mrs. Young, Dr. Young (Teignmouth), and Mr. and Mrs. Marwood Yeatman (Canterbury).

Mr. Baker, of Fore Street, Exeter, undertook the furnishing of the rooms ; Messrs. Jeboult, of High Street, sent ornamental pottery ; Messrs. Veitch and Son, plants ; Messrs. King and Son, Benares ware and ornamental pottery ; and Messrs. Griffith and Son, of London, electric apparatus.

There was a vocal and instrumental concert during the evening, the contributors being the Misses Salter, Mr. A. C. Roper, Mrs. Marten Body, Mr. Barre, Dr. Bayley, Mr. W. S. Passmore, Mr. H. Rice, and Mr. Maxwell. The band of the Royal Marines (Plymouth) was also present. The proceedings were of an interesting character, and the arrangements made were to the satisfaction of everyone. A most enjoyable evening was spent.

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and to the apprentices, your Committee would like the to know that previous to their apprenticeship these lads



were educated and maintained by the Fund, so that at the end of their articles they will have been entirely educated and started in life through this means.

Several dentists broken down in health and fortune and overtaken by old age, have been and are being helped by weekly allowances to overcome the struggle for existence. In one case, which terminated fatally, the last few days of his existence were made bright and happy by the relief he and his family received from the Fund.

Your Committee are educating and maintaining ten children, some of whom will shortly be eligible for being placed out in the world, and so make way for others who will no doubt present themselves, as time goes on, for similar benefits. In one case a boy of superior education and family is being prepared for the preliminary examination of the Royal College of Surgeons, in view of his going through the curriculum for the L.D.S. diploma; this boy will, subject to the arrangements entered into by your Committee with the various dental hospitals in the United Kingdom, be placed at one of them free of all fees, and in all probability, should circumstances permit, have his necessary fees paid for him at the general hospital. He is now engaged as a pupil with a qualified dentist, learning the mechanical part of his profession entirely free of charge.

In accordance with Rule XX., this Annual Report is now offered for your approval and acceptance, and your Committee trust that their labours for the past year will meet with your approbation.

In conclusion, the best thanks of the Association are due to the auditors, Messrs. J. Dennant and Charles West, for their kindness in auditing the accounts, and also to Mr. George Tawse for his generosity in preparing the balance sheet.

The report was considered to be very satisfactory, and was adopted.

The CHAIRMAN then called upon Mr. Lee Rymer, in the absence of the Hon. Treasurer, to read the financial statement, and in doing so alluded to the great and sudden bereavement which had befallen Mr. Woodhouse by the death of his brother. He (the Chairman) was quite sure that the subscribers present would condole with their Treasurer in his loss, and would convey to him their heartfelt sympathy. A vote of condolence was unanimously adopted.

MR. LEE RYMER then read the following report of the Treasurer, for the year ending June the 30th, 1890 :

GENTLEMEN,—Again I have the pleasure as Treasurer of the Benevolent Fund of the British Dental Association to give an account of my stewardship, not I trust because “I am no longer to be steward,” for I find the work very interesting and it is always a pleasure to help

the needs of others, and my fellow committee men and myself, when pained by the sad accounts of distress brought before us, have real happiness as your almoners in giving the needful help when and where most wanted.

We are very materially helped in this by our Hon. Secretary, Mr. George W. Parkinson, who is untiring in investigating each case and so supplying us with the truth about it which it would otherwise be most difficult to obtain.

Thanks to our Hon. Accountant, Mr. George Tawse, the balance sheet, which will be in the hands of each subscriber, is most business-like and clearly shows our financial position. But figures are very dry and matter of fact, so I will go through them and comment on each item, comparing our position with that of last year, and if possible add some interest to the statement.

Our gross receipts for the year ending June the 30th, 1890, were £398 5s. 4d., or a few shillings less than the like sums the previous year; this is at first sight disheartening and perhaps is a little disappointing; but on looking carefully at the particulars I think you will agree with me that we have some encouragement. In 1889 our donations amounted to £129 2s. 7d., this year to only £92 1s. 2d. Donations are necessarily uncertain, but we look to subscriptions as a more certain source of income, and this year they compare favourably with those of 1889; they were then £243 5s. 16d., while this year they reached £276 19s. 6d., an increase of £33 14s.; this shows a wholesome state of vitality which I trust will be continued. It is not an increase "by leaps and bounds," but I trust shows real vigour and though slow will be sure.

Of the amount this year from donations, £29 5s. 8d. has been received from the collecting boxes on the table at each meeting of the British Dental Association, whether in London or of the branches. This plan you will remember was suggested by Mr. Booth-Pearsall and has proved a real success.

As regards our disbursements for benevolent allowances, I am pleased to call your attention to their increase, for my feeling is that we should rather spend than hoard. We have to be cautious, for very urgent cases may arise which would need speedy help; but if the money we have kept for the purpose has not been called for we then put it in the Consols that it may be fruitful. The amount of Consols at 2½ per cent. now held by the Fund is £1,190 17s. 6d., which cost £1,190 3s., and an income from this source during the past year has been £29 4s. 8d. Well, this year we have distributed and I believe well, £378 4s. 11d., instead of £251 15s. 4d. last year.

Many of the cases have been most interesting and I would fain here give some details to make my story less matter of fact and dry, but I must forbear and leave to your Hon. Secretary the pleasure of giving you particulars of cases with which he is in close touch, and which

# BALANCE SHEET AS AT JUNE 30th, 1890.

Dr.

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	£	s.	d.	£	s.	d.		£	s.	d.
Cash in Bank at July 1st, 1889 ...	...	...	...	246	0	2	Benevolent Allowances ...	...	...	...
Cash in hands of Secretary at July 1st,	...	...	...	...	...	...	Postage and Miscellaneous ...	...	...	...
1889 ...	...	...	...	39	3	4	Printing ...	...	...	...
Donations ...	...	...	...	...	...	...				
Subscriptions, 1888 ...	...	...	...	...	...	...	Cash in Bank at June 30th, 1890 ...	...	...	...
Do. 1889 ...	...	...	...	3	3	0				
Do. 1890 ...	...	...	...	89	1	0				
Do. 1891 ...	...	...	...	183	14	6				
Interest on Investments ...	...	...	...	1	1	0				
				...	...	...				
				276	19	6				
				29	4	8				
				...	...	...				
				683	8	10				
				11	2	5				
				...	...	...				
				£694	11	3				

July 29th, 1890.—We have examined the Books of the Benevolent Fund of the British Dental Association with the Vouchers and hereby certify the above Balance Sheet to be correct.

(Signed)

J. DENNANT, }  
CHARLES WEST, } Auditors.

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the mode of argument in regard to comparisons, there was no good likely to come out of it. They might say of the London college that probably its ordinary examination was quite as stiff as any. With regard to higher qualification, he was glad to think Mr. Smale pointed out so clearly that he in his own mind and many others did not admit of the term higher qualification in regard to the dental diploma. Additional qualifications if they liked; but he and others thought that the L.D.S. was a fair dental diploma, because it embraced everything. It was not the number of letters that constituted the value of a diploma; it was the knowledge which the profession first gained of the value of a diploma, and by-and-by the public. Mr. Campion had said that ten years was a short time in the life of a profession; but he (Mr. Turner) thought they must concern themselves more with what their wants were now. They did not want to change their L.D.S. The public had scarcely learnt to know what it meant, and yet Mr. Campion was seeking to cast something else upon it before it had borne fruit. He thought it would be some time before they could venture upon such a course as had been suggested, and if they did it at once it would be making confusion more confused.

Some people wished to extend dental education in the direction of the complete scientist—to make the dental student a chemist or a good mechanic, and enable him to see things, as it were, entirely from a scientific point of view. Others, like Mr. Campion, wished to enlarge the dental students' studies in the direction of surgery and medicine. He thought Mr. Campion was right in choosing the latter direction for the extension of the dental students' studies. They must not forget that, however scientific a man might be, and however good in the technical workroom, in weighing the gravity of his own situation in connection with a patient, he ought to be able to look at a patient when a patient entered his room with something more than the feelings of a mere scientist; he ought to be able to look at a patient from that humanitarian point of view which was occasioned by familiarity with suffering. And that familiarity was only to be got by medical and surgical education, by constant attendance at hospitals and in wards by the beds of the sick. In his closing sentences, Mr. Turner thanked Mr. Campion for having brought the question so ably, clearly and honestly before the Association.

Mr. HOPE said he thought the extolling of the L.D.S. diploma on the one hand, and to a certain extent the lowering of it on the

other, was done almost without its seeming to be done. While some of those present were willing to admit that the L.D.S. was almost sufficient, and it ought to be quite sufficient, at the same time students were given to understand that it was not. He was quite certain parents suffered. The sons who wished to enter the dental profession started for what their parents considered an ample and thorough qualification—the L.D.S. The students went to London and stayed a short time, and returned. What was the result? The father, brother, or other person interested in a student found he had returned with an idea that the L.D.S. was not sufficient; that the student had a passion and fever for getting other letters at the end of his name. He considered it wrong in the face of the extolling of the L.D.S. that had taken place, that the fever should have been allowed to get to such a height. The student was not satisfied, and the consequence was that a longer term of education was demanded before the pupil thought he would satisfy what he (the speaker) called professional pride. It was all very well to say make the L.D.S. perfect. They would not do it unless they cured the fever he had referred to for getting the M.R.C.S., in order to let the dentist stand on level terms with the medical profession.

Mr. SPOKES, after describing Mr. Campion's paper as a very cleverly constructed one, said he thought Mr. Campion started right. Mr. Campion started by trying to lay down a good standpoint from which all his arguments might be deducted. He was willing to accept Mr. Campion's own standpoint, that dental work was a branch of general surgery. But when Mr. Campion went on to give an explanation, he (Mr. Spokes) was strongly inclined to an opposite direction. They must all recognise that there must be a continual change taking place in dental matters. In order to judge of the circumstances of any particular case they must analyse the position. In the present instance they found at one end certain ambitious young men, but not too young; the younger members who were naturally inspired with ambition to better their position. At the other extremity they found what he should consider the more satisfactory, because the more broader view, that in the more or less remote future a different state of things must come about. In the future he thought dental surgery would be absorbed in the general circle of the healing art in exactly the same way that general surgery had been brought into the circle of the general healing art of its sister medicine. It was

quite possible that in the course of time there might be an examination to include the whole of medicine, of which dental surgery would be only a special branch. But what he ventured to say was this—let them make the best of their present opportunities. If there was any need of the L.D.S. to be improved in the direction of Mr. Campion's higher qualification let it be improved to that extent, although he (Mr. Spokes) did not admit it was necessary. They were prepared to find a general stiffening tendency in examinations and there was a general stiffening tendency now. In concluding, Mr. Spokes urged that Mr. Campion had no right to demand any legislation in the dental world on the part of the few in contra distinction to the many.

Mr. PEARSALL said that in the discussion it had often been forgotten that a diploma did not make a man. The honour of a diploma depended upon its possessor. What the members should do in regard to higher qualification was, not to make a new diploma, but enhance the value of that which they had got. In the first place, the teaching might be enormously improved compared with what it was at present. He should make the examinations to last at least a week. He thought it would be an advantage to every student to have the examinations last a week instead of a few hours, because the students would in the former case have opportunities to collect their thoughts. The examiners would have a hard time of it and the candidates would certainly have to pay a great deal more for the privilege of being examined. The way in which Mr. Campion had approached the subject was calculated to do a great deal of good, because it showed on the part of the younger men of the profession a desire to make the profession a reality and not a mere sham. He thought the methods of teaching at the different hospitals could be enormously improved. At present they seemed to be utterly devoid of any system. He meant to say the different details were not carried out as they should be, but in an incoherent way. With regard to higher qualification, he should like to see the different licensing authorities arrange to allow a man to get a diploma in any special branch. He thought that that would meet any aspirations which dentists had.

Mr. C. F. RILOT ventured to suggest that, in spite of the sincerity of Mr. Campion's convictions, the latter had not proved his point. The advantages which Mr. Campion claimed were, first of all, for the student. Secondly, he claimed that another diploma



would act as a stimulus to the teaching ; and, thirdly, that it would grant a higher professional and social status to the dental profession. It seemed that Mr. Campion must have forgotten that at the two last examinations in London more than half the men were plucked. He thought that that ought to be quite a sufficient stimulus. Let them first of all get students to pass the ordinary examinations comfortably and then they would have time to grant a higher diploma to work for. He failed to see that a higher diploma would give the dentists any higher professional or social status. The whole beauty of the dental profession was the unity of it. They were one corporate body united in a mystic ring, the L.D.S. Mr. Campion would split them up from being one body into different sets—one separate class with the higher diploma, the other set bound by a totally different ring altogether.

Mr. A. S. UNDERWOOD said there could only be one higher qualification in dental surgery. That higher qualification existed already, and had been obtained with very great credit to himself by Mr. Campion, namely, the diploma which was conferred by his professional friends in their admiration of his abilities. He thought that the reputation which the dentists could gain from the general public, and the reputation Mr. Campion and gentlemen of energy and enthusiasm like him had already gained from their professional brethren, was the only higher qualification that could exist in dental surgery than the L.D.S. He thought the main issue involved was what effect a new additional diploma would have on the one which the profession already possessed. If it could be shown that a new diploma would lower the value of the L.D.S., that would be sufficient to put it out of the question altogether. He was firmly of opinion that that would be the effect. He was sure the public did not care or understand much about diplomas. If it were possible for men to hold any diploma higher than the L.D.S., and if it were placed within reasonable reach, it would be lowering the status of those who only held the L.D.S. It might be urged that the present conjoint diploma, standing, as it did in the opinion of some people, above the L.D.S., did not lower the L.D.S. But the conjoint diploma was [within the reach of only a very few. That was the fact why Mr. Campion considered it insufficient in its operation ; but he (Mr. Underwood) thought it was for that reason that the conjoint diploma did not depreciate the value of the L.D.S. to any great extent. He thought the summary of the question must be

this—that in the opinion of most of those who had been engaged in teaching any such additional diploma as had been suggested, would lower the value of the L.D.S. The serious outcome of the discussion, beyond the immense credit attaching to the mover, would be that it would lead possibly to a definite resolution in the direction of both the medical and dental students, treading the same path in the first period of their education. The suggestion made by Mr. Canton ought to be carried into effect, and he hoped in the discussion that it would not be lost sight of, but that something definite in the direction indicated would be done.

Mr. MATHESON said with regard to the resolutions which it had been suggested should be brought forward for the modification of the L.D.S. Curriculum and examination in the direction indicated by Mr. Smale, that he hoped they would not be passed. He did not himself believe that that was the direction in which to improve the L.D.S. diploma, for the reason that if the dental student and the general student had in their curriculum to run on the same lines for the first eighteen months of their education, and had to take the same examinations at the end of those eighteen months, it would involve two points—(1) the mechanical training of the dental student must be lessened ; and (2) in so doing he would acquire additional knowledge which he (Mr. Matheson) maintained would be practically useless to him—useless compared with the other knowledge he might have obtained in the same time. The question which the members had to consider was, “What will make us better dentists?” The question as to the status which dentists obtained either in the eyes of medical men or the public was, he considered, entirely secondary. Nobody maintained more strongly than he did the necessity for giving dentists a good groundwork in anatomy, physiology, medicine and surgery ; but they should only study those matters so far as they made them better dentists. The curriculum in force at present for the L.D.S. was good, but it might be improved. The discussion had been tending in the direction that they should lessen the practical training in favour of theoretical training. Anything tending in that direction should be deprecated most strongly. What dentists wanted seemed to him to be a more practical surgical knowledge, and what they also wanted more and more of was training in manipulative ability in the use of their fingers. The scheme to run on parallel lines with the medical student would not help the

dentists in that direction. Mr. Smale hinted that there might be an honours' examination; and it seemed to him that in yielding that point Mr. Smale yielded to the point for which Mr. Campion contended. If the L.D.S. diploma could not be improved in any way why did they want an honours' examination. To say that those who were seeking a higher qualification in dentistry were simply seeking to stand above their fellows was perfect nonsense in the face of the fact that the alternative suggestion was that of taking degrees which had a great many more letters than the L.D.S.

Mr. CUNNINGHAM said that one result of the discussion on Mr. Campion's paper was to show that after all, even taking the most adverse views, there was great unanimity really existing between those present. He proceeded to point out that Mr. Smale, when he said there was likely to be an honours' examination, absolutely admitted the need of a higher qualification. On every side they appeared to have one common mind, that they wanted to improve as far as they could the L.D.S. diploma. He denied, however, that the absence of this higher qualification was a barrier to dentists in acquiring knowledge. He urged that the Association ought to do something to encourage better teaching and secure good average results at examinations. The teachers must assume the responsibility of the failures at examinations. Moreover, if they were going to maintain the social position of the L.D.S., the sooner the dentists could identify their examination with that of the medical student, so far as the latter was consistent with the practical attainments of the dental profession, the better it would be for dentists. He thought the ideal curriculum of a student was the curriculum of the Irish College.

Mr. W. H. COFFIN said it seemed to him that something of this kind would take place in the future—either the L.D.S. would be abolished and the M.R.C.S. would be a surgical degree comprising all that a man required to practise a specialty of surgery; or the M.R.C.S. would be abolished and the L.D.S., with other similar degrees for specialties would be granted, not as a registerable medical degree, but as a surgical one for the purpose.

Mr. D. HEPBURN said it seemed to him that the members were gradually drifting away from the main point, the question as to the advisability of organising a higher qualification in dental surgery. If anything could disarm opponents, it would be the courtesy which Mr. Campion had exercised in bringing forward

his paper. One point which had been touched upon seemed to be the peculiar connexion which the dental surgeon had with the general medical practitioner. It appeared to him that the organisation or institution of any higher degree in dental surgery, instead of drawing the members of the dental profession nearer to the medical profession, would have a distinct tendency towards separating the former from the latter. Each profession, if no other degree were granted, had a degree which was very searching and complete.

Mr. F. H. BALKWILL said he failed to understand why in the future the medical profession could not see its way clear to say that specialists such as dentists should go through an examination in what was required for general practice in that specialty, and if they passed, become members of the College of Surgeons. But to require a specialist to have sufficient knowledge to qualify him for general practice in addition to his specialty, would be too great a tax upon him.

Mr. CAMPION was then called upon to reply. He said it was absolutely hopeless for him to attempt anything in the way of a complete answer to the discussion that had taken place. It was impossible for various reasons, first, want of time; in the second place, it was given to few men to be able to speak at a moment's notice in reply to points immediately after they were raised; and in the third place there was this to be remembered, that many gentlemen who had spoken on the subject had had his paper before them a few days and had been able to formulate more or less at leisure, objections to which he had to reply at a moment's notice. He did not agree with Mr. Canton that Mr. Smale had answered his paper; he had altogether avoided it. Mr. Turner had objected to one part of his paper, namely, where he referred to the fact that by following a certain definite course of study men were obliged to neglect their work at the dental hospital. It was not a new argument, but only the practical application of one advanced by Sir John Tomes in the letter from which he had quoted—the argument, namely, that any attempt to thrust the two curricula in upon one another and get through them both in the shortest possible time must be detrimental to one or the other. If students adopted the particular course of study which Mr. Smale advised, it was found to materially affect the work at the dental hospital, and that was why he (Mr. Campion) was opposed to the change which Mr. Smale wanted to make, and

which Mr. Canton had supported, the change in favour of making dental students take the same amount of anatomy as medical students. If an advance was to be made it should be in the direction of surgery rather than of pure anatomy. In referring to Mr. Matheson's remark that they must be as practical as they could, Mr. Campion quoted from the address on "Surgery" by Mr. Lawson Tait, at Birmingham, at the recent meeting of the British Medical Association. Continuing, Mr. Campion said he would very much deprecate the course which had been suggested by Mr. Canton, namely, to pass a resolution in favour of the change hinted at by Mr. Smale. Let them discuss the matter at the next annual meeting, and take no action, at any rate, till their meeting. Mr. Pearsall had said that he would like to see an examination extending over a week. That was just his (Mr. Campion's) idea for the higher dental qualification. Such an examination would hardly do, perhaps, for the L.D.S., but they might have it for the optional and higher qualification. His idea was not to supersede the L.D.S. Where he differed from Mr. Smale was in this, that, whereas Mr. Smale would supplement the L.D.S. by the conjoint diploma, he would, for the reason stated in his paper, supplement it by a higher dental qualification. Mr. Smale's statement that the College of Surgeons of London were considering the desirability of establishing an Honours' Examination, seemed to him (Mr. Campion) to be an admission of the very principle for which he was contending. Mr. Hepburn thought a higher qualification would tend to separate the dental profession from the medical profession. If so it would be very much to be deplored. His (Mr. Campion's) contention was that it would tend to draw them nearer together, because medical men judged a dentist not by the degree which he had so much as by his personal character and ability. In concluding, Mr. Campion said he thought the members of the Association might congratulate themselves upon the fact that they had touched upon a rather delicate subject and yet discussed it in a thorough and at the same time in the best tempered way.

#### THE ANNUAL DINNER.

The annual dinner of the Association was held at the Rougemont Hotel, where about 120 gentlemen sat down to a *recherché* repast admirably served under the personal superintendence of Mr. Hussey, the manager. The large Assembly room, in which the banquet was

held, had been decorated with palms and exotic plants, and the band of the 1st Rifle Volunteers, under the direction of Mr. Geo. James, performed a selection of music during the progress of the meal, the programme including musical gems from Auber, Boggetti, Balfe, and Bucalossi. The chair was taken by the President of the Association (Mr. J. T. Browne-Mason). The following members of the Association were present:—F. J. Vanderpant, L. Matheson, W. H. Woodruff, W. E. Harding, Morton Smale, R. P. Lennox, G. McAdam, H. L. Albert, J. J. M. Acland, W. Ackland, W. F. Cornelius, D. Young, A. Kendrick, W. J. Mason, J. Smith Turner, Felix Weiss, F. H. Weiss, W. Weiss, H. Mason, C. Browne-Mason, S. Mundell, T. E. King, J. J. Andrew, J. H. Gartrell, G. Cunningham, W. B. Pearsall, E. L. Dudley, G. W. Parkinson, F. Canton, J. C. Clarke, M. Hughes, A. Fothergill, W. Fothergill, J. H. Sanders, J. T. Fripp, F. H. Balkwill, W. J. Goodman, W. H. Goodman, A. S. Underwood, A. Smith, D. Hepburn, W. Penfold, G. F. Elmitt, T. P. Richée, L. Hicks, J. Fenn Cole, W. Tothill, S. Lee Rymer, A. Kirby, W. B. Bacon, J. S. Amore, G. G. Champion, A. Gabell, W. A. Rhodes, W. Glaisby, J. L. Stocken, W. C. Williams, E. Apperly, W. P. Paterson, Dr. Mitchell, F. Petty, W. Helyar, W. Matthews, E. Goodman, F. W. Minshall, A. Barnard, F. Cooke Parson, W. A. Hunt, P. O'Meehan, and G. P. Pearman. The following also accepted invitations to be present:—Mr. W. Peters, ex-Mayor of Exeter (representing the Mayor), the Right Hon. Lord Sidmouth, Lord Poltimore, Sir John Shelley, Bart., Admiral White, C.B., Colonel Milne-Home, Mr. Marwood, S. Yeatman, Mr. H. M. Imbert-Terry, Mr. W. J. Coleridge, Mr. B. C. Cleave, Mr. W. H. Ellis, Mr. J. Dallas, Mr. A. Burch, Mr. A. H. A. Hamilton, Dr. Blomfield, Mr. C. E. Bell, Mr. Russell Coombe, Mr. R. Martin, Mr. A. Roper, Mr. J. Mortimer, Mr. E. Brash, Dr. Brown, Mr. G. D. Clapp, Dr. Kempe, Mr. L. Tosswill, Mr. H. M. Body, Mr. J. Somer, Dr. Budd, Dr. Raglan Thomas, Dr. Deas, Dr. Woodman, Mr. G. F. Gratwicke, Mr. F. Pink, Mr. S. H. B. Glanville, Mr. A. Groser, Dr. Hewett, Mr. T. Bird, Dr. Barrett, Dr. Hewitt, Dr. Melotte, and Dr. Dudley Buxton.

The CHAIRMAN apologised for the absence of Sir Henry Acland (detained in Berlin), Mr. Dallas (who had done so much for the convenience of the Association at the Museum), Dr. Slade-King (President of the Western Branch of the Medical Association), and Mr. R. Martin.

"The Queen," and "The Prince and Princess of Wales and the rest of the Royal Family," were submitted by the Chairman and loyally received.

The CHAIRMAN next proposed "The Navy, Army, and Reserve Forces."

Admiral WHITE, C.B., in responding for the Navy, alluded to the President's address, and said he agreed with the President of the

Dental Association that dental surgery was much required in the Navy and among our soldiers, although he thought more among the former than the latter, because soldiers could get dentists on land.

Colonel MILNE-HOME, in replying for the Army, cordially endorsed what had fallen from the President in his able address. He (the Colonel) was quite old enough to know that it was highly important to the British Army that the suggestions made by the President should be taken up at headquarters. They knew that there were several enterprising surgeons in the Army who had made dentistry somewhat of their own study and had profited by it, or rather their patients had profited by it. They knew what progress had been made in surgery in general; how that many a promising lad who might have lost his leg had had it saved through the progress of surgery; and it was equally important that they should occasionally save a tooth as well as a leg. Therefore he trusted that the authorities in Pall Mall might adopt the suggestions made by the President and apply them to the Army as well as to the Navy, in the way which had been alluded to by the gallant Admiral who had preceded him. Touching the toast, the gallant officer said the recruits he had seen since he came to Exeter, though not so tall as he should like to see, were of excellent bone and muscle. He had not yet examined their teeth, but when a Dentist Major was appointed perhaps he would do that. But so far as he had seen they were all good men, and all he wanted to see was more of them. In conclusion, he said that if the British lion showed his teeth to more advantage than he had done in the past, it would be due in some measure to the suggestions made by the President on the previous day.

Sir JOHN SHELLEY replied on behalf of the Reserve Forces.

Lord SIDMOUTH, in submitting the toast of "The British Dental Association," said his own personal experience with that body was not a very extended one, but he was not prepared to say he wished it should be larger than it was. He had, on the part of other persons, a very considerable knowledge, during a number of years, of the benefits of the dental profession, and it had seemed to him that from the time of his earliest days, when the entrance into a dentist's room was something like what Virgil described in the sixth book of the *Æneid*, or what Dante described in the entrance to his *Inferno*, "*Lasciate ogni speranza, voi ch'entrate*"—"Leave hope behind, all ye who enter here." Certainly in those days they did not see those instruments which to him seemed to be something like bradawls. The scientific apparatus then was very simple, but perfectly unmistakable. In those days also they had not the benefits which were now enjoyed, of painless dentistry. He would like to take up some remarks which had fallen from the two excellent officers who had already addressed them that evening. His experience having been somewhat of the same profession as that of Admiral White, he could

perfectly well remember that whenever a man had the toothache there was nothing for it but to go to the doctor—who perhaps knew nothing of the dental profession—and he produced an instrument and extracted the tooth. In looking at the very great benefits now conferred by the diffusion of scientific knowledge, and the presence of accomplished dentists in almost every part of the country, he remembered also a good many years ago that a friend told him he had been to a country practitioner, who had dragged him twice round the room before he got his tooth out. This led him (Lord Sidmouth) to think how great a benefit had been conferred upon the labouring classes of this country by the improvement in dental science. From what he could learn occurrences of tooth disease were more frequent among the labouring classes than they used to be. He did not know the cause, but there was no doubt of the fact, and he was sure that hardly any of them knew how very great was the suffering which was experienced by those who could not have the attention of the experienced dentist. Therefore he looked with the greatest pleasure to the extension of dental practice, and the humane inventions which had lately been introduced into what was formerly an exceedingly painful subject to deal with, and which, under the present circumstances, was attended, if not with actual pleasure, with the absence of that pain which formerly attended both the extraction and the cure. He was quite sure that as medical science in this direction advanced in the country districts, they would find the greatest benefits conferred upon those who now suffered a pain not often known to the community at large, but which all who had experienced toothache must know was one of the most agonising in nature. He begged to couple with the toast the name of Mr. J. Smith Turner.

Mr. SMITH TURNER, who was received with prolonged applause, in responding said that, with regard to what had been said about Mr. Browne-Mason's suggestion as to dentistry in the army and navy, he could tell the professional gentlemen who had spoken to them so kindly that evening, that the Association had once knocked at the door of the Admiralty, but had been refused. They had also done something in the direction of teaching children in industrial schools, training ships, &c. They had prepared an elaborate chart whereby they could register the teeth of those children from the beginning, which they trusted would be a great benefit to the rising generation. Mr. Smith Turner then reviewed the progress of the Association, and said they had a long up-hill fight before them. They did not, however, mean to rest in their present position. If education, if attention to professional duties, and if culture could do anything for them, they were all endeavouring, by these means, to attain that position which they were striving to attain. They were trying to equal medical men in their professional knowledge, and above all, in their usefulness to their patients. They were learning to consider their patients; they



(the dentists) were learning to value their influence and to exercise it for their patients' benefit, not for their own alone. The dentists must look to themselves for support because the public generally did not understand what the professional feeling was. The public thought a man who advertised was a pushing man who did not wish to hide his light under a bushel. Within the past few weeks it had been his good fortune to snatch from the hands of certain advertising quacks, who pretended to do wonderful things, three patients. The first patient was a barrister, the second a solicitor. One of the patients said he was recommended by his most intimate friend, who was a doctor, to adopt the course he originally did in submitting to the treatment of quacks. The doctor sent the patient in question to the quacks on the strength of something he had seen in a ladies' month, and which he thought was very wonderful. The third case was that of a lady of refinement and culture, who took her child to one of the advertising body of quacks and paid a large sum of money to have four teeth filled with gold. There were certain cavities in the same teeth that were not so patent to the eyes of observers; those cavities were left un-stopped to the great suffering of the child. He (Mr. Turner) when the case came before him, at once saw that the teeth should not have been stopped but withdrawn altogether at the child's time of life, because there was lateral pressure. The dentists must not seek to fight the quacks on their own grounds. They must not descend to the same level as the quacks, and they must not appeal to the public in the form of collections of literature, a system which the quacks adopted. The dentists must learn to be steady and useful. On such an occasion as that at which the dentists were then present, they were delighted to find that sympathy had been aroused by the address of the President. They were delighted to find that men of position, integrity and refinement were beginning to see that the dentists had something to say for themselves and wished to do something for suffering humanity, and that their object was to relieve suffering. He appealed to medical men to extend the same amount of consideration to dentists as they expected to be extended to themselves, and he appealed to them not to send patients to quacks. He hoped that ere long quackery would be abolished, and honesty and integrity recognised.

Mr. MORTON SMALE, who was cordially received, submitted the toast of "The Medical Profession," and said it was a profession which they must all feel was a very noble one. The lives of medical men were lives of self sacrifice. They went about with their lives in their hands, and there was not a medical man worth his salt who would not sacrifice his life for the good of his patient. He referred to the medical profession as a good old tree and said that one little branch was grafted into it ten years ago. That little branch the grand old tree was not quite sure whether it should nourish or not. He thought, however, that it had changed its mind and was now doing its best to nourish the little branch, which was the dental profession.

If he wanted to prove that the medical profession was doing its best for the dental profession he should say it was proved by the fact that the Devon and Exeter Hospital had opened its doors, cleared out a ward, and put it at their service in order that they might demonstrate there. He, however, had a grievance, namely, that the Devon and Exeter Hospital had not got a dentist. He hoped that in a few weeks, or at least in a few months, that a dentist would be put in charge of a dentist's department at the Devon and Exeter Hospital.

Dr. WOODMAN, who met with a hearty reception, in replying, said the medical profession had a most kindly feeling towards the dentists, in fact, he did not think anything had relieved the medical profession of so much trouble and annoyance as the spread of dentistry. He did not think medical men, except in country places, were more annoyed than at having to undertake dental work and to have to extract teeth, for they really knew nothing about stopping them, and they owed a deep debt of gratitude to the dental profession, who had come forward and helped them. Judging from the remarks of Mr. Smith Turner, in replying to the toast of the British Dental Association, he (Dr. Woodman) thought Mr. Turner hardly quite realised that the medical profession had always been anxious to put work into the dentist's hands. Mr. Turner did not seem to quite remember that which he (Dr. Woodman) remembered, namely, that the medical profession had only just escaped what the dentists were suffering from now. But they were just emerging from that position. The dentists had a large number of men registered as dentists who were practising before 1878. But as years went on they would grow out. As to a higher degree for dentists, he should say wait a while. They had a very good degree in the L.D.S. It was open to any of them to take the degree of M.R.C.S., and the medical profession welcomed dentists cordially and right royally when they did take it. He believed this, that the great thing in the present day was to be friendly and work shoulder to shoulder. He was sure the prevailing desire among the members of the medical profession in Exeter was to help the dentists.

The toast of "The Press" was submitted by Mr. W. A. HUNT, and responded to by Mr. S. H. B. GLANVILLE and Mr. A. UNDERWOOD.

Mr. F. CANTON proposed "The City and Corporation of Exeter," and said he was sure all the members of the Association would agree with him in returning thanks to the Mayor of Exeter for the very kind and hearty reception which he accorded to the members on Wednesday evening, and more especially must they appreciate his Worship's kindness when they remembered the sad calamity under which he and the Mayoress were suffering. He was sure the Mayor and Mayoress had the sincere sympathy of the members of the Association in their bereavement.

Mr. Alderman PETERS (ex-Mayor), in responding to the toast, said, speaking on behalf of the citizens, they would be very glad whenever

the time came that the Dental Association visited Exeter again, and he could promise in the name of the city a hearty welcome.

Mr. A. H. A. HAMILTON submitted the toast of "The Dental Benevolent Fund," and said it seemed to him to be a very noble thing that one of the first objects of the Association was to establish the Benevolent Fund.

Mr. PARKINSON, in replying, said the work during the past year in connection with the fund was better than during the preceding years. Subscriptions had been received during the past year from thirty additional subscribers, and he hoped the fund might receive an additional thirty subscribers during the ensuing year.

Mr. S. LEE RYMER proposed "The Visitors," and—

Lord POLTIMORE, who was heartily received, in responding to the toast, said he was quite certain that if at any time it might be the lot of any of the visitors to have to become more intimately acquainted with one of the members of the Dental Association they would remember, even in the time of their greatest distress, the kindness with which they had been received that night. He trusted that the British Dental Association would go on and prosper. He was sure, being intimately acquainted with the rural districts of the country, that dentistry was a matter which required a great deal of improvement in those districts. The work which the Association was doing would be of the utmost benefit to those who, by reason of their living away from large towns, were unable to avail themselves in the way in which residents of large towns were able to, of the services of skilled dentists. He wished the Association a long and prosperous career.

Mr. FELIX WEISS, in proposing "The Health of the Chairman," said that if there should be anyone present who doubted the interest which the Chairman took in the profession, in professional progress, and in seeing that his professional colleagues were well received, the proceedings of the last two days would be a sufficient answer. His address was a very able one, while the reception which the Association had received was one that would not readily be forgotten. In the annals of the British Dental Association he was fully convinced of this, that when they came to speak of their general meetings the meeting at Exeter would be remembered as a very memorable one, and as one that had done a great deal of good to the profession at large and to themselves individually.

The toast was received with great enthusiasm, the company singing "For he's a jolly good fellow," and giving hearty cheers for Mr. and Mrs. Browne-Mason.

The CHAIRMAN briefly replied, and the proceedings terminated.

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*Saturday, August 23rd.*

DEMONSTRATIONS.

A considerable number of the members attended a series of demonstrations, beginning at 9 o'clock, in the Board Room at the Devon and Exeter Hospital. The demonstrations arranged were as follows :—

Dr. DUDLEY BUXTON, of London, showed an improved Carter's oral net spoon in which the handle was lengthened and carried across the back of each bowl for the purpose of giving strength to the instrument and removing all chance of a bowl being broken off while in the mouth.

He also showed a modified Mason's gag with a hinged ratchet, instead of the usual bar and thumb screw, claiming that it could be much more rapidly applied and removed than the old form of gag and that it was easily worked and controlled with one hand.

Previous to using his nitrous oxide gas apparatus, Dr. Buxton called attention to a small chamber between the facepiece and the gas bag which serves either for holding a little piece of sponge that can be charged with a few drops of lavender water, or eau de Cologne, to disguise the gas ; or some cotton-wool charged with sal-volatile, should a slight stimulant be considered desirable. He said that this chamber was specially useful when administering the anæsthetic to children. The gas bottle was mounted on a convenient and handy little tripod which can be doubled up and put into the anæsthetist's hand-bag when required for visiting ; the foot key which he employs serves the double purpose of spanner for firmly attaching the union leading to the facepiece and of key for releasing or turning off the gas. During the exhibition of the anæsthetic the gas quieter which was employed prevented the disagreeable hissing sound that alarms many patients and sometimes adds considerably to the difficulties of the administrator. Taken altogether the apparatus produced a very favourable impression and deserves commendation.

Dr. Buxton next explained the construction of an ingenious modification of Clover's gas and ether apparatus, from diagrams which he had prepared, showing how the two anæsthetics could be mixed and how by the arrangement of the pipes and stopcocks either could be given separately at will. This apparatus, with illustrations, appears in our Original Communications at page 610.

The last and perhaps the most novel appliance exhibited by

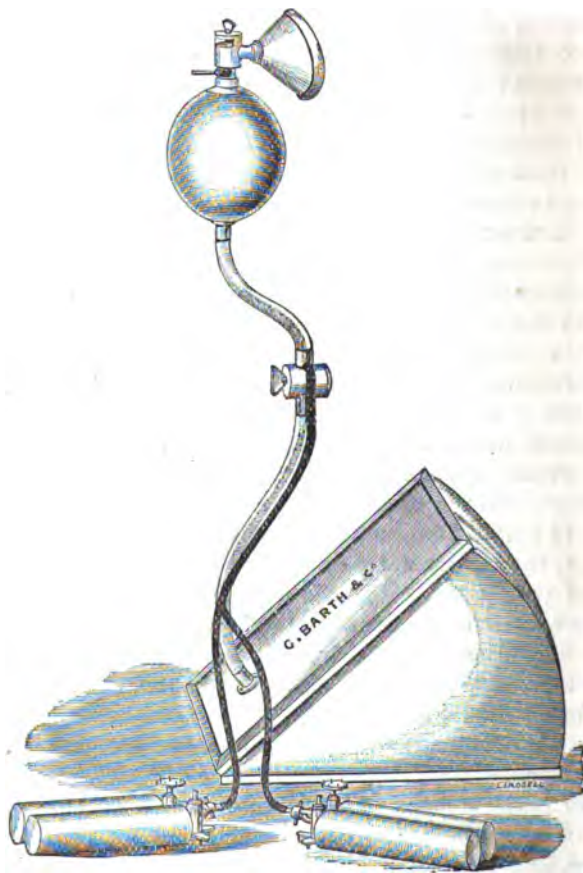
Dr. Buxton was a chloroform inhaler. In construction it resembles Richardson's well-known ether apparatus for producing local anæsthesia and consists of bellows, air-balloon covered with netting, stopcock for regulating the dose of chloroform vapour, graduated glass bottle, for holding the chloroform, provided with inlet and outlet tubes, and facepiece covered with flannel to admit as much air as the patient requires to take with the chloroform vapour. By turning on the stopcock one quarter, a small supply of vapour is given and the air drawn through the flannel on the facepiece largely dilutes it and it will be obvious that by turning the stopcock half on, or full on, the strength of the anæsthetic is increased accordingly. In answer to a question put by Mr. Balkwill, of Plymouth, Dr. Buxton said that the full strength of the vapour obtainable by this apparatus was equal to about four per cent., and anything beyond that he should not consider safe.

Mr. T. BIRD, of London, related the early experience of the late Mr. Clover and also his own with nitrous oxide gas and ether in combination, and demonstrated a failure by passing gas over ether as was done in the days of their experiments. After the operation was over and the patient had been dismissed a gentleman, who was evidently unaware of the purpose of Mr. Bird, asked him if he considered the administration a success. "Not in the sense in which the question is put," was the reply, "but as I undertook to demonstrate a failure, I think I succeeded in doing so." Nitrous oxide gas and ether in combination were next exhibited by Mr. Bird, as now recommended by the best authorities, viz., the patient was permitted to take eight or nine inhalations of pure nitrous oxide, and then ether was given, the result being a successful anæsthesia lasting nearly four minutes.

Mr. Bird's last trial, which was a success, was with a mixture, the formula of which he did not make known, as it is at present only being used experimentally, which deprives the patient of feeling, but not altogether of consciousness. He spoke of it as likely to be useful for the rapid extraction of a single tooth in the cases of business men and others whose time is valuable and who, while dreading the loss of consciousness and the pain of an extraction, and desiring to avoid both, are yet anxious to resume their duties immediately after the operation without experiencing the unpleasant after effects which sometimes follow a deep and complete anæsthesia.

Dr. HEWITT, of London, administered a ten per cent. mixture

of oxygen and nitrous oxide gas to a patient with perfect success, there being no trace of jactitation during the inhalation, no lividity about the features, while the arm, upon being lifted up, was as flaccid as that of a person in a deep natural sleep. He used his portable apparatus, which, through the courtesy of the manufacturers (Messrs Barth and Co.), we are enabled to illustrate.



After the operation, Dr. Hewitt explained the apparatus and his method of using it. He first runs a little nitrous oxide into the small bag, with which he washes out the wedge-shaped reser-

voir and thus clears it of air. He then fills the small bag with oxygen (it holds one gallon), shuts off the oxygen, turns on the nitrous oxide, and as it ascends to the small bag he keeps squeezing the bag, and in this way forces it down into the reservoir until it is filled, and as it holds ten gallons he knows when it is full that he has a ten per cent. mixture. Having adjusted the face-piece, he places his foot on the reservoir, and keeps the small bag fully distended during the whole of the time that is occupied in anæsthetising the patient. He administered ten gallons in this case, and subsequently remarked that he could have given four or five times the quantity without danger to the patient. Dr. Hewitt says that the mixture is a very safe anæsthetic, that it possesses advantages which are not found in any other, that it is particularly suited for patients of weakly constitution and those in delicate health. He does not, however, consider it powerful enough for those strong persons that are occasionally met with, who require a large dose of any anæsthetic to produce unconsciousness, but, as he very truly observed, it is easy to give such patients pure nitrous oxide with his apparatus by simply opening the top of the gas bottle, if it be found that the mixture has not the desired effect, or it is considered necessary to give gas alone on first seeing the patient. He remarked that the apparatus was cumbersome to carry about, and was on this account objectionable. This led him to express a hope that those members of the dental profession of a more mechanical turn of mind than himself would devote their attention to it, and succeed in simplifying it and making it more portable.

If it be necessary to give the mixture under pressure, as Dr. Hewitt administers it, this fact will have to be borne in mind in any attempt that is made to improve the apparatus.

The PRESIDENT (Mr. G. T. Browne Mason) extracted the teeth in every case.

Mr. F. H. BRIGGS, of Torquay, showed a useful method of tooth crowning.

Mr. G. G. CAMPION, of Manchester, exhibited Mr. William Broughton's electric apparatus for operating in the mouth. It consists of two lamps, one of which is attached to a jointed arm on an upright stand, can be fixed in any position and throws a good light in the mouth, while the other is fixed on the forehead of the operator in a direct line with the line of sight and serves admirably for examining the teeth.

Mr. G. CUNNINGHAM, of Cambridge, described his continuous gum process, and showed specimens of the work. Fuller information on this subject will be found in Mr. Cunningham's paper, which will appear in this Journal in due course.

Mr. J. H. GARTRELL, of Penzance, exhibited specimens of his removable bridge work and explained his method of making them. Mr. Gartrell has proved again and again how successfully this kind of work can be constructed, and the pieces he showed at Exeter were much admired.

Mr. A. KIRBY, of Bedford, showed the working of his electric motor and pointed out its numerous movements. It is not so powerful as the latest form of Cuttris's and Detroit motors, but Mr. Kirby can no doubt easily make it so and thus fit it for every kind of dental work which can be required of a motor. He also showed two forms of an electric mallet, one carrying a straight plugger point, and the other a point set at an angle of about 45 degrees.

Mr. T. COOKE PARSON, of Clifton, demonstrated the fitting of seamless collars by the American Mandrel system in connection with gold crowns and bridge work. Want of space prevents anything like an adequate description of this process, and it requires to be seen to be clearly understood and appreciated.

Mr. W. H. WOODRUFF, of London, treated and filled a dead tooth by the immediate method for Mr. Bradbury, of Huddersfield.

Mr. G. W. MELOTTE, of Ithaca, New York, U.S.A., exhibited his soldering appliances and gave a practical demonstration of their usefulness.

Mr. J. M. ACKLAND, of Exeter, the acting honorary secretary for demonstrations, made all the arrangements with the hospital authorities for this section of the work of the Association.

#### NOTES ON THE MICROSCOPICAL SECTION.

We are indebted for the following account to Mr. Hunt, of Yeovil:—One room was entirely devoted for two days to the exhibition of microscopic slides; and twenty-five excellent instruments, which were in charge of the able and obliging Mr. Curties, junr., from Baker's, High Holborn, furnished with all needful accessory apparatus, gave facility of investigation to all who wished to avail themselves of the opportunity.



I may here publicly thank the gentlemen in various parts of the kingdom who lent slides—many of which were of great value as well as interest, and which slides were all returned to their respective owners by August 25th last. Mr. Curties also brought a number of most interesting slides, and the provision indeed exceeded the digestive powers of the members. I am also indebted to Mr. A. Pringle for lending me a series of most beautiful photo-micrographs, which I exhibited in the library during the *soirée*—on a 12ft. by 12ft. screen—with the aid of my limelight lantern, kindly worked by Mr. G. G. Campion. This exhibition was of a general character; real objects, such as butterflies, ferns, &c., being projected on the screen; photos of exquisitely shaped diatoms, &c.; views of Exeter Cathedral; and lastly, a large sized photo of the President, Mr. Browne-Mason; everything of a professional nature, of course, being eliminated.

One thing I must refer to with great regret. Mr. Sewill had kindly lent me the magnificent series of photo-micrographic lantern slides, illustrative of dental histology, bacteriology and caries, and Mr. A. S. Underwood had promised to exhibit and explain them and also to show some of his own. The Executive had negatived my desire to have a ward at the hospital fitted up for the exhibition, and they had but one room in the museum buildings to offer, viz., the large room in which the dental exhibits were. During the brief time at my disposal, viz., the luncheon hour, I found it impossible to exclude the brilliant sunshine. Large windows on the roof were uncovered of their tarpaulin by a high wind blowing at the time, so that even with my oxy-hydrogen jet of 800 candle power it was found impossible to exhibit in the bright light, to the disappointment of very many members, and to none more than to W. A. Hunt, the organizer of the microscopic section.

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At two o'clock members of the Association and friends assembled at the Cathedral, over which they were personally conducted, despite his being an invalid, by the Dean (Dr. Cowie), assisted by the Rev. Canon Atherton. After leaving the Cathedral the party proceeded to the Guildhall, over which they were shown by the Town Clerk (Mr. G. R. Shorto), who had the Mayor's insignia laid out for inspection, including the chain and jewel worn by the Mayor and presented to the city by the Archæological Society of Great Britain, in memory of their reception, also the sword and cap of maintenance worn and

carried by the Mayor's swordbearer before him on State occasions, and presented to the city by Henry VII. ; also a sword given to a Mayor of the period by Edward the Black Prince, and a number of ancient and interesting documents, some with the Great Seal of England attached and extending back to Saxon times, and a book of letters sent by different Kings and Queens with the royal sign manual in each case. Owing to the kindness of the Misses Outhwaite members of the Association and friends were subsequently enabled to visit the ruins of Rougemont Castle. Mr. Winslow Jones attended, and gave many interesting details concerning the ancient fortress.

#### THE PRESIDENT AND MRS. BROWNE-MASON'S "AT HOME."

The "At Home," given by the President and Mrs. Browne-Mason was held at the Victoria Hall, commencing at four o'clock. For the occasion the hall had been exquisitely fitted up. Collections of flowering plants were placed in different parts of the room, and here and there among them were placed seats and lounges for the accommodation of guests. Bannerets and coloured draperies were hung in various positions, and ornamental stands of pottery containing flowers and plants were placed in such a way as to lend to the effectiveness of the decorations, which, as a whole, were very pretty. The programme of music was admirably selected and excellently rendered by the following :—Mr. Vinnicombe, Miss Lyon, Mr. Theodore France, Mr. Dean Trotter, and Mr. H. Long. The Exeter Orpheus Glee Union also well sustained their part of the programme. Mr. Vinnicombe acted as accompanist.

Among those who accepted invitations to be present were :—Mr. F. Petty, Mr. and Mrs. Alverston Cabell, Mr. A. Meath, Mr. Arthur Underwood, Mr. Hepburn, Mr. Morrison, Mr. and Mrs. Eadie, Mr. and Mrs. H. Hems, Mr. Goodman, Mr. G. G. Reeves, Mr. E. E. Brand, Mr. Cecil H. J. Williams, Dr. Gordon, Mr. and Mrs. Kirby, Mr. and Mrs. Van der Pant, Mr. Apperley, Mr. and Miss Holman, Mr. J. J. H. Sanders, Mr. H. J. Thomas (Swansea), Mr. Louie Egan, the Rev. and Mrs. A. Hamilton, Mr. and Miss Tucker, Mr. Pearson Hayward, the Rev. Sub-Dean and Mrs. P. L. D. Acland, Mr. Russell Coombe, the Misses D'Arcy Irvine, Mr. and Mrs. F. Loosemore, Mr. and Miss Loosemore, Mr. and Mrs. Hepburn, Mr. Edgar Mortimer, Mr., Mrs., and Miss King, Mr. and Mrs. De Winter Baker, Mr. Lee Rymer, Mr. and Mrs. Holden, Mr. and Mrs. A. Burch, the Misses Burch, Mr. and Mrs. Arthur Roper, the Rev. T. Russell, Mr. and Mrs. C. B. Mason, Mr. T. and Mrs. Garland, Mr. Albert, Mr. and Mrs. Kendrick, Mr., Mrs., and the Misses Wippell, Mr. King, Mr. and Mrs. Raymond Roberts, Mrs. Woodruff, Mr. Fryer Cornelius, Mr. Stocker, Mr. Carlton Riches, Mr. A. Fothergill, Mr. Glaisby, Mrs. and the Misses Clarke, Mr. Morgan, Mr. H. Mallet, Mr. and Mrs. Beal, Mr. J. M. Ackland, Mr. Burt and friends, Mr. and Mrs.

Mundell, Dr. and Mrs. Pullin, Dr. and Miss Hunt, Mr. and Mrs. de C. Dickenson, Mr. Ackland, Mr. Cooper, Mr. W. Helyar, Mr. and Mrs. Seymour Hare, Mr. Walter Coffin, Mr. W. Penfold, Mr. F. Canton, Mr. Morton Smale, Mr. H. V. Veisse, Miss L. Mormson, Mr. M. H. Penfold, R.N., Mr. Elliot Jamieson, Mr. H. C. Browne-Mason, the Misses Browne-Mason, Mr. and Mrs. H. W. Michelmores, Mr. and Mrs. Lionel Roberts, Mr. Robert Pasmores, Mr., Mrs., and Miss Clarke, Mrs. Halloran, Mr., Mrs., and Miss Shorto, Mr. and Mrs. Barton, Mr. A. J. Barton and Miss Barton, Mr. W. H. Barton, Captain, Mrs., and the Misses Sproule, Mr. Moresby, R.N., Miss Moresby, Mrs. and Miss Grant (Hillersdon), Mr. and Mrs. Croote, Mr. and Mrs. H. Marten Body, Mr. and Mrs. Leslie Powne, Mrs. and Miss Rookes, Mr. H. Gould, Mr., Mrs., and Misses Bennett, Mr. H. W. Holmes à Court, the Rev. J. and Mrs. Ingle, the Rev. J. Popham, Mr. and Mrs. W. Ash, Mr., Mrs., and Miss Pennell, Mrs. and Miss Moore Miller, Mrs. and the Misses Fursden, Mr. and Mrs. Gratwicke, Mr., Mrs., and the Misses Munk, Mr. and Mrs. E. Brash, Dr. and Mrs. Woodgates, Misses Pasmores, the officers of the 11th Regiment, Mr. and Mrs. C. Bell, Mr., Mrs., and the Misses W. Horton Ellis, Mr., Mrs., and Misses Andrew, Mr. and Mrs. S. Pope, Mr. and Mrs. T. J. Bremridge, Miss E. James, Dr. Blomfield, Mr. W. L. Jones, the Rev. Canon Hobson, Mr. Rilot, Mr. Tippell, Dr. and Mrs. P. L. Brown, Mr. Felix Weiss, Mr. Balkwill, Mr., Mrs., and Miss Latimer, Mr. Mrs., and the Miss Ashworth, Mr. George McAdam, Miss McMarland, Mr. Groser, Mr. Winter Sharp, Mr. Fenn Cole, Mr. W. May, Dr. Alexander, Mr. Donald Cameron, Mr. Barrè Bayly, Miss Bayly, Mr. W. G. Mason, Mr. Henry B. and Miss Mason, Miss Leigh, the Rev. C. and Mrs. Robson, Mr. and Mrs. A. W. Buckingham, the Rev. C. J. Eckett, Mr. and Mrs. L. Tosswill, Mr. and Mrs. W. B. Fulford, Dr. and Mrs. Christopher Harvey, R.N., Mr. and Mrs. Marwood Yeatman, Mrs. A. Read, Mr. and Mrs. W. C. Richards, Miss Beckley, the Rev. and Mrs. Grundy, Major and Mrs. L. Bearne, Mr., Mrs., and Miss Pickering, Mr. and Mrs. Moore, Miss King, Mr. S. Norrish, Mr., Mrs., and Miss Osmond, Mr., Mrs., and Miss Edgcombe Edwards, Dr. and Mrs. Henderson, Mr., Mrs., and Miss Carter, Mr., Mrs., and Miss Lane, Mr. and the Misses Thomas, Mr., Mrs., and the Misses Steele-Perkins, the Rev. and Mrs. Bazeley, Mr. and Mrs. Bankhart, the Misses Holmes, Mr., Mrs., and Miss Harding, Dr. and Mrs. Budd, Colonel and Mrs. Milne-Home and party; Mr. Henry Campion, Mr. and Miss Glanville, Mr. and Mrs. W. Davy, jun., the Rev., Mrs., and Misses Kitchen, Captain Bedingfield, Devon Regiment; Mr. C. J. Tait, the Rev. G. and Mrs. Minhinick, Mr. Peel, Mr. and the Misses Somer, Mr. L. Thomas, Mr. and Mrs. G. Tucker Clapp, Mr. Pink, Mr., Mrs., and Miss Hayward, the Rev. C. and Miss Manley Hawker, Mr., Mrs., and Miss Peters, Dr. J. Mortimer, the Rev. and Mrs. Geldart, Miss Mabel Norris, Mr. Richard Norris, Mr. George

Franklin, Misses Lewis, Mr. Lewis, Mr. J. T. King, Dr. and Miss Raglan Thomas, the Rev. Canon, Mrs. and Miss Atherton, Mr. and Mrs. C. Ware, the Rev. F. W. Pulling, Mr. and Mrs. W. M. Snow, Mr. S. B. Fox, Mr. and Mrs. T. Hawkins, Mr. J. Edgell Searle, Mr. and Mrs. E. Bowden, Mr. and Mrs. Langdon Thomas, Mr. F. Conway Sharpe, Mr. and Mrs. Pring, Mr. T. Mortimer, Miss J. E. T. Symons, Miss Nellie Symons, the Rev. W. G. Munk, the Ven. Archdeacon, Mrs. and Miss Barnes, Mr. and Mrs. Cecil Clapp, Mrs. James Searle, Mr., Mrs., and the Misses Hake, the Misses Mason, the Misses Mortimer, and Mr. and Mrs. J. Delpratt Harris. Mr. Sclater supplied the flowers and plants; Mr. Jeboult, the ornamental pottery stands; Mr. Baker, the furniture; Messrs. Palmer and Co., who supplied the refreshments at the *soirée* at the Museum on Thursday, also provided the refreshments on Saturday, and in both instances gave entire satisfaction.

A reception was given on Saturday evening by Mr. Brand at his residence in Cathedral-yard to a number of members of the Association. The rooms were beautifully decorated, and the visitors were charmed with the many works of art and objects of *vertu* which Mr. Brand was enabled to show them.

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## ORIGINAL COMMUNICATIONS.

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### A Demonstration on the Modern Methods of Anæsthesia by Nitrous Oxide, Ether and Chloroform.\*

By DUDLEY BUXTON, M.D., B.S.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, ANÆSTHETIST IN  
UNIVERSITY COLLEGE HOSPITAL, THE DENTAL HOSPITAL, &c.

SUCCESSFUL anæsthetising consists in attention to details. It is firstly necessary to determine what anæsthetic to employ, and then to know how to administer it in the best possible way, having in view three things, (1) the safety of the patient, (2) the success of the operation, (3) the minimising of the discomfort to which we subject the patient. In dental surgery very diverse operations have to be performed, from the extraction of a loose tooth to the removal of a buried wisdom, complicated with *trismus dentium*, or the excision of an epulis. And again, there is a wide variation in the age, state of health, &c., of the patients, who often without care

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\* Read at the Annual General Meeting of the British Dental Association at Exeter, August, 1890.

or consultation, seek surgical aid at the hands of the dentist. It then behoves the dental surgeon to use much circumspection alike in the choice of anæsthetic, and the readiness with which he undertakes, or allows another to undertake for him, the due administration of that agent upon which the choice has fallen. For, while patients prepare themselves and count the cost, even discounting their chances of a fatal termination when about to undergo a major surgical operation, they think nothing of a visit to the dentist, or of the anæsthetic which that may involve, and again, whereas no surgeon would think of removing a tumour or amputating a limb without first ascertaining whether the patient possessed healthy kidneys, heart, arteries, &c., on the other hand, I imagine it would never, or seldom, be possible for a dentist to learn any facts about the patient's general health, save what he picked up in the course of conversation. This consideration then, surely imposes additional need for caution on the part of the dentist, and for a very accurate knowledge of the action of the anæsthetic agents he may either be called upon to administer, or have administered for him.

We will take Nitrous Oxide first as being of widest application. It has the least restriction upon its use, because it is practically safe for all persons to take, whether they be young or old, diseased or sound, male or female. It, however, is too transient in its action for any save very brief operations. We shall therefore lay it down as a rule, that for brief operations nitrous oxide will be employed. For operations lasting from two to five minutes, gas with ether, or gas with a mixture of ether with chloroform. For operations requiring still longer, chloroform. Yet another class of operations require chloroform, those namely, which are conducted by the aid of the actual, potential, or Paquelin's benzine cautery; the extreme inflammability of ether and its proneness, if mixed with air and heated, to explode, rendering its use unsafe under these circumstances.

Nitrous oxide needs cautious administration to certain classes of persons and in certain states of bodily enfeeblement. Let us consider these. Persons afflicted with organic disease. Persons exhausted by prolonged vigil or fasting. Persons who are highly excitable and nervous, those in fine, whose nerve cells are easily thrown out of balance, and

whose lives are more or less governed by irregular and unduly violent nerve explosions—nerve storms. The case of persons who have some organic disease has been considered by me at length elsewhere.\*

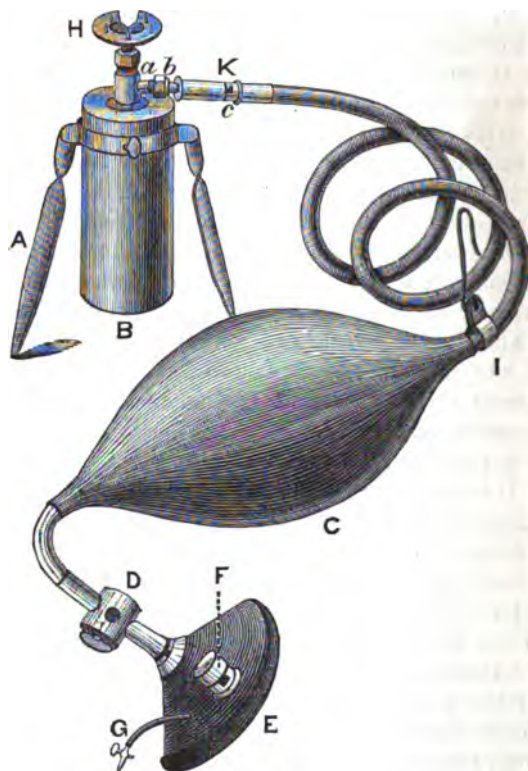


Fig. 1.—Apparatus for giving Nitrous Oxide. (A) Tripod. (B) Steel bottle containing liquified Nitrous Oxide. (C) India rubber bag. (D) Chamber containing sponge, cotton wool, &c. (E) Face-piece fitted with (F) cap expiration valve. (I) Hook attaching tube to administrator's button hole. (K) Silencer.

With regard to nervous persons, and the class includes the most diverse individuals—the hysterical servant maid, the brain tired philosopher and savant, the excitable child, who,

\* JOURNAL OF THE BRITISH DENTAL ASSOCIATION, September, 1889. Further researches into the action of nitrous oxide. *British Journal Dental Science*, "When is Nitrous Oxide a Dangerous Anæsthetic?"

if one only knew it, is hovering upon the verge of chorea or epilepsy, and the woman physically and mentally exhausted by frequent pregnancies or repeated floodings—much may be said, but I am compelled to restrict myself to dealing with only the practical side of the question.

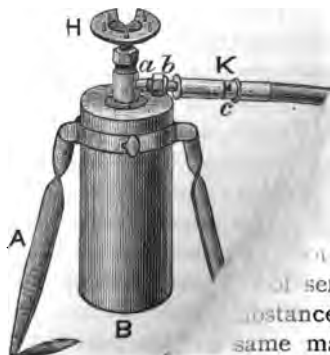
In giving nitrous oxide to nervous persons and young children, whose confidence has not been previously won, very much difficulty is often experienced. To combat this it is most important to eliminate discordant elements—and these are fuss, noise, sensations of asphyxia, ether fumes, &c., or an alarming paraphernalia. All except one friend should leave the room, and that one be strictly enjoined to keep silence or only to whisper. The apparatus I find to answer best, is one which is here figured (fig. 1), and which has been made for me by Mr. Blennerhassett of London. Its main peculiarities are that (1) it is provided with an efficient "silencer" (*K*) which ensures absolute quietude, (2) it is adapted for gas only, and so offers no temptation to the administrator to give "only a whiff of ether," (3) it possesses a special contrivance to filter the air, and if necessary, to impregnate the gas with aromatic or other vapours. It consists of the usual tripod (*A*), used because it was so portable and compact, this supports a steel bottle containing fifty gallons of compressed nitrous oxide (*B*). To the outlet pipe of this bottle (*a*) is fixed the silencer (*K*), which checks all the hissing and spluttering of gas, and from this a wide calibred mohair tube conducts the gas into an ordinary Cattlin's bag. Another tube is attached to this which communicates with a chamber made in metal and opened or closed by a valve, permitting either air or nitrous oxide gas to enter. In this chamber (*D*) are placed morsels of fine honeycombed sponge or teased out medicated cotton wool. These substances can be moistened with lavender water, eau de Cologne, or with sal volatile, or liq. ammoniæ dil.—if a stimulating action was needed. The ordinary Clover's facepiece is attached by a bent metal tube, and provided with an expiration valve of peculiar construction (*F*).

In cases when the breath or buccal exhalations are likely to be infective,\* as, for example, phthisis, quinsey, syphilis,

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\* The danger of infection was pointed out some time ago by a correspondent to this Journal, who recommended that a fresh Cattlin's bag should be used after each case. This somewhat expensive precaution is rendered unnecessary by my simple contrivance.

whose lives are more or less governed by irregularly violent nerve explosions—nerve storms. persons who have some organic disease has by me at length elsewhere.\*



...which is difficult in conditions of faint, which so often without, sal volatile, eau de service. It need hardly be substances or stimulating vapours in the same manner. The use of the odourable scent of the perfumed gas, as a means of inducing patients willing to inhale gas freely and without distressing noises in the head and horrible odours are often determined by the hissing of the gas, which are always intensified in the hyperæsthetic state.

...which more time is required than nitrous oxide—use of ether—but in conjunction with the gas—recommended. The apparatus which I have found valuable is what was called Clover's gas and ether apparatus, though since Mr. Clover's time many useful alterations have been made in its construction by Mr. G. H. Meyer and others. The gas supply is derived from a steel cylinder (B), fixed as before in tripod and the gas travels through an india rubber tube (m) to the inhaler (D). This is shown in fig. 2. The apparatus is so arranged that gas can be given alone, or if ether also is needed, by turning a tap (k) the gas passes directly into the receiver (C) containing ether, and having traversed it and passed over the surface of the ether, escapes into the face-piece (P) along a tube (n). The amount of admixture of gas and ether is regulated by another tap (o). The whole apparatus is light and is suspended by a hook (i) from the administrator's buttonhole.\*

\* The apparatus is made by Messrs. Meyer and Meltzer, of London.



uses of this apparatus are:—

the control the administrator possesses over the gas with which he is working; thus he can administer with pure gas, then with ether and by degrees permit the patient to breathe without spasmodic spasm or coughing.

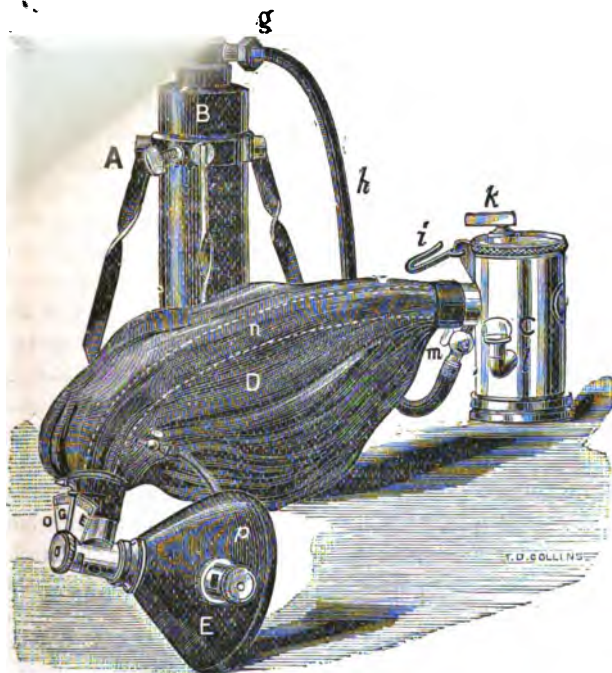


Fig. 2.—Apparatus for the Administration of Nitrous Oxide and Ether.

(2.) Its great simplicity and portability. It has been termed unsightly and cumbersome, but no one familiar with its use would find it either the one or the other.

(3.) It is the only inhaler in which the gas is made to actually traverse the ether.

When ether only is used the same apparatus is equally satisfactory.

&c., the use of cotton wool steeped in a germicide, such as terebene, is desirable. The cotton wool is a perfect air filter, and so prevents all infection of the Cattlin bag and obviates any fear there might be of infecting the next patient. When the ordinary apparatus is used grave fears of such infection must always arise. The use of a drop or two of eau de Cologne or lavender water sprinkled over the morsels of sponge, is most convenient. It gives a pleasant odour, which children especially appreciate, and will, if permitted to sniff at it before the gas is turned on, allow one to give the first dose of gas—always the initial step which is difficult—and so pave the way to ultimate success. In conditions of extreme weakness or the “feeling faint,” which so often attacks ladies about to have a tooth out, sal volatile, eau de Cologne, or liq. ammon. dil. is of service. It need hardly be added that other aromatic substances or stimulating vapours may be employed in the same manner. The use of the silencer and the agreeable scent of the perfumed gas, as a rule, make nervous patients willing to inhale gas freely and obviates the distressing noises in the head and horrible dreams which were often determined by the hissing of the gas, and which are always intensified in the hyperæsthetic stage of anæsthesia.

In cases in which more time is required than nitrous oxide gives, the use of ether—but in conjunction with the gas—is to be recommended. The apparatus which I have found most serviceable is what was called Clover's gas and ether inhaler, although since Mr. Clover's time many useful alterations have been made in its construction by Mr. G. H. Bailey and others. The gas supply is derived from a steel bottle (fig. 2, *B*), fixed as before in tripod and the gas traverses an india rubber tube (*m*) to the inhaler (*D*). This is shewn in fig. 2. The apparatus is so arranged that gas can be given alone, or if ether also is needed, by turning a tap (*k*) the gas passes directly into the receiver (*C*) containing ether, and having traversed it and passed over the surface of the ether, escapes into the face-piece (*P*) along a tube (*n*). The amount of admixture of gas and ether is regulated by another tap (*o*). The whole apparatus is light and is suspended by a hook (*i*) from the administrator's buttonhole.\*

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\* The apparatus is made by Messrs. Meyer and Meltzer, of London.

The advantages of this apparatus are :—

(1.) The absolute control the administrator possesses over the strength of vapour with which he is working ; thus he would commence the administration with pure gas, then permit some to play over the ether and by degrees permit full ether vapour without exciting spasm or coughing.

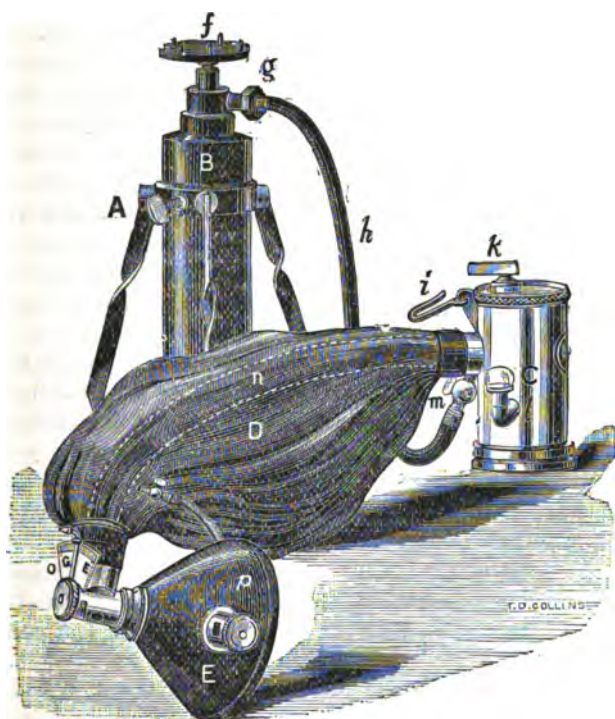


Fig. 2.—Apparatus for the Administration of Nitrous Oxide and Ether.

(2.) Its great simplicity and portability. It has been termed unsightly and cumbersome, but no one familiar with its use would find it either the one or the other.

(3.) It is the only inhaler in which the gas is made to actually traverse the ether.

When ether only is used the same apparatus is equally satisfactory.

For still more prolonged anæsthesia, when the mouth is the part to be operated upon, chloroform is often desirable, and I propose to explain and show an apparatus which seems to me to be the most satisfactory at present in use. Speaking of the relative safety of anæsthetics, I may say that in spite of the very strong opinions which have recently been expressed concerning chloroform being as safe, or safer, than ether, there is no doubt in the minds of the leading anæsthetists that such opinions do not express the whole truth. Personally, I am quite convinced that the conclusions arrived at by the Hyderabad Commission are inaccurate as regards this country and other temperate climes, and dangerous in so far as the Commissioners generalised from conclusions deduced from premises constructed from experiments made with lower animals, taking the conclusions as applicable to human beings. I still feel bound, in the light of our knowledge, to say that chloroform should never be given unless there was some cogent reason for substituting it for ether or a mixture.

The apparatus I propose to show is a modification of Junker's inhaler, made by Messrs. Krohne and Sesemann, of London. Its features are, that the amount of chloroform vapour is easily regulated; that the supply of vapour is rendered continuous and not intermittent as in the former apparatus; that the vulcanite or leather facepiece is replaced by a mask made of flannel, which permits a free interchange of air and obviates any feeling of suffocation from deficiency of air. This flannel cap is also an advantage from its cleanliness and the ease with which it can be changed for a new one.

The apparatus consists of a bottle of four oz. capacity, to which a metal top is screwed. In this top are three openings, one funnel-shaped and closed by a mill-headed stopper, used for charging the bottle with chloroform, the other two leading into two tubes, an afferent or long tube, which reaches almost to the bottom of the bottle and through which air is pumped through the chloroform. This is easily done, as the free end (outside the metal top) is connected by a long india rubber tube through which air is propelled by either a ball press—ball valved to allow entrance of air, but only exit through tube system of the apparatus—or by a foot bellows.

To the other and short tube is attached a long india rubber tube, which communicates with the flannel facepiece. In this tube is a mechanism which converts the intermittent blast of air caused by the ball pressure, into a continuous current. In the afferent tube is interpolated a simple stop-cock, which regulates the quantity of air passed through chloroform, and so therefore controls the quantity of the anæsthetic supplied. To charge the apparatus,  $3\frac{1}{2}$  of chloroform is poured into the bottle, and the hand or foot bellows worked slowly, the flannel mask being applied to the face.

When an operation upon the mouth is contemplated, it is obvious that this cap could not be used after the operation was commenced, and so at this stage it is quickly slipped from the afferent tube, and its place taken by a flexible rubber tube, which is either passed through the nostril or held in the mouth.

In the old apparatus the metal top of the bottle receiving the chloroform had to be unscrewed when it had been refilled, and so much time was lost, whereas in the present apparatus this is obviated by the funnel shaped opening described above.

This form of inhaler is useful, not only for human beings, but is most serviceable for the lower animals upon which operations have to be performed, for example, castration in lambs, &c., and much pain and suffering to farm stock would be spared if chloroform were habitually given, as can easily be done if Krohne's\* inhaler for animals is employed.

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### On the Agency of Micro-Organisms in Caries of the Teeth.†

By J. HOWARD MUMMERY, London.

WHEN called upon to open the discussion on this important subject I naturally felt some diffidence in undertaking the duty, a diffidence in no sense decreased by the knowledge that I should be speaking in the presence of experts who have made this subject their especial study. But for the expectation of being able to peruse in my own language the most

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\* See "Chloroform for Farm Stock," for details of chloroforming the lower animals.

† Read at the International Medical Congress, held at Berlin, August, 1890.

important literary contribution to the subject of recent years, I should hardly have dared to undertake so responsible a task.

The unavoidably delayed translation of that work, and my meagre acquaintance with the German language, must be my excuse if I appear to ignore any important point in the most recent development of the subject, or show a lack of appreciation of that record of painstaking investigation. Doubtless any such deficiencies will be fully remedied in the discussion which will follow, which I hope will be commensurate, not with the imperfection of my introductory address, but with the scientific importance and practical significance of the subject.

In opening a discussion on the influence of micro-organisms in caries of the teeth I think the desired end will be best attained by venturing as little as possible on theoretical ground and drawing attention especially to the several points which are still debateable, questions on which competent observers hold somewhat different opinions. In order adequately to appreciate these points a brief historical *resumé* of the subject may be advisable.

While the discovery of the association of micro-organisms with caries and the dependence of this disease on their presence and fermentative action is of very recent date, the idea of some organism being present was held, as is well known, in ancient times. Without dwelling on these early theories, I may allude to the worm hypothesis which held ground for a long period, taking the place of the theory upheld by Hippocrates, that caries like other diseases was caused by a bad condition of the humours. Whatever significance we may attach to this ancient worm theory, the first important point which strikes one in this historical aspect is the question whether the exploration of our special region (the mouth) may not legitimately claim to have been the means of anticipating, even by centuries, the dawn of bacteriological science, for in the volume of the *Transactions of the Royal Society* for the year 1864, appears a letter dated September 17th, 1863, from that great pioneer of microscopy, Anthony Leuwenhoeck, of Delft. It is entitled "Microscopical observations about animals in the scurf of the teeth, the substance called worms in the nose and the cuticula consisting of scales."

In this letter he says :—" Though my teeth are kept usually

very clean, yet when I view them in a magnifying glass I find growing between them a little white matter as thick as wetted flour; in this substance, though I could not perceive any motion, I judged there might probably be living creatures. I therefore took some of this flour and mixed it, either with pure rain water in which were no animals, or else with some of my spittle, having no animals nor air bubbles to cause a motion in it; and then to my great surprise perceived that the aforesaid matter contained very many small living animals, which moved themselves very strangely. The largest sort were not numerous, but their motion strong and nimble, darting themselves through the water or spittle as a jack or pike does through the water. The second sort spun about like a top and were more in number than the first. In the third sort I could not well distinguish the figure, for sometimes it seemed to be an oval, and other times a circle; these were exceedingly small and so swift that I can compare them to nothing better than a swarm of flies or gnats, flying and turning among one another in a small space.

Besides these animals there were a great quantity of streaks or threads of different lengths, but of like thickness, lying confusedly together, some bent and others straight. These had no life or motion in them.

There can be little doubt that the last named streaks were the familiar leptothrix filaments, and probably Leuwenhoeck also detected, as suggested by Dr. Miller, the well-known "spirillum sputigenum," which is found in abundance between the teeth near the margin of the gums, and exhibits a very active movement.

It is astonishing that with the imperfect instruments of the day, this great observer should have so anticipated modern scientific discovery.

Ficinus, in 1846, describes caries as in part a putrefactive process caused by the presence of infusoria (denticola).

Klenke, in 1850, while agreeing with Ficinus as to the putrefactive variety, describes another form of caries in which a phytoparasite, which he calls *protococcus dentalis*, takes a part.

But the first systematic account of the action of micro-organisms in caries is that of Messrs. Leber and Rottenstein, in 1867, when they published their important *Recherches*

*sur la Carie dentaire*, a contribution all the more remarkable when we remember it was published when scarcely any of the great discoveries in bacteriology had been made.

They describe caries as due partly to the action of acids, and partly to the proliferation in the tubes of the dentine of a definite micro-organism, the *leptothrix buccalis*; that the growth of this fungus in the substance of the dentine could not take place without a preliminary decalcification of the tissues of the tooth by acid. They found that the tubes of the dentine were dilated and penetrated by granular matter, and finding that this granular matter stained violet when treated with iodine and acids, they looked upon it as composed of the elements of the *leptothrix* fungus which proliferated in the dentinal tubes. They considered that although the preliminary stages were due to the action of acids, the appearances found were not sufficiently accounted for by the action of acids alone, and were due in part to this proliferation of the fungus in the tissues.

They concluded that an acetous fermentation was set up in the mouth with particles of food lodged between the teeth, and in fissures in the enamel, and considered it probable that lactic acid was formed in this fermentation.

Professor Wedl, in his work on "The Pathology of the Teeth," published in Vienna, in 1870, discusses Leber and Rottenstein's views; he considers that the *leptothrix* described by these authors has no direct connection with the origin of caries. The extension of caries in the dentine he believed to be effected by the acid, and not by the fungus. He says, "The proliferations of the elements of the fungus, without doubt, penetrate and expand the dentinal canals, but according to my observations, this cannot occur until the decalcification of the dentine is complete, or, at all events, until the first stage of this process. I have never detected a proliferation of fungus in the still hard, carious dentine." He concludes that "caries of the teeth is a process which has its origin, chiefly, in the abnormal secretions of the gums, and likewise in those of the rest of the oral mucous membrane and of the salivary glands, and commencing at suitable points on the exterior of the tooth, spreads in the direction of the pulp cavity. In consequence of the decomposition of the secretions, acids are formed which extract the calcareous salts



from the hard tissues, and give rise to a disintegration of the affected portions of the latter, in which no inflammatory action occurs. The destructive process is promoted essentially by the accumulation of secretions and particles of food, and opportunity is afforded for the proliferation of *leptothrix buccalis*, in the dead and softened dentine."

We meet for some time with no further important researches in this direction. The existence of a micro-organism in caries had been demonstrated, and from the microscopical appearances in carious tissue it had been assumed that this micro-organism (supposed to be exclusively the *leptothrix buccalis*) participated in the pathological process; acids produced in or taken into the mouth, having prepared the way for its advance by a preliminary decalcification of the tissue.

At this point in the history of the investigation, the influence of micro-organisms as an agent in the production of caries, was, at all events in England, practically disregarded, notwithstanding the researches of Leber and Rottenstein—the view that held the field at this time being the purely chemical theory of caries.

At the meeting of the International Medical Congress in London, in 1881, Messrs. Underwood and Milles communicated an investigation into the effects of organisms on the teeth and the alveolar portions of the jaws, which together with the subsequent important researches of Professor Miller, has resulted in placing the facts of the action of micro-organisms in caries on a thoroughly accepted basis.

They considered that "caries is absolutely dependent upon the presence and proliferation of organisms." "That these organisms attack first the organic material, and feeding upon it create an acid which removes the lime salt, and that all the differences between caries and simple decalcification by acids are due to the presence and operation of germs."

They demonstrated the existence of micrococci and rod-shaped bacteria in the dilated tubes of the dentine, and by submitting healthy teeth to septic and aseptic fluids in flasks proved that in an aseptic flask caries never occurs, in a septic flask a change, at all events greatly resembling it, frequently does occur as stated by Mr. Charles Tomes in the discussion on this paper. "In former experiments on the production of artificial caries, germs had not been excluded, and consequently

had exerted their full action; but Messrs. Underwood and Milles showed that when they were excluded, caries did not occur, and he considered that this was "a contribution to our knowledge of the artificial production of caries, which can never be left out of consideration by any subsequent observer, or writer on the subject."

It still remained to be shown what was the acid produced by the micro-organisms, and in what way it was formed in the mouth. The first place in this investigation belongs to Professor Miller, of Berlin, who bringing a sound knowledge of chemistry to bear upon his researches, conducted a series of important experiments, which have done a great deal to clear up this portion of the subject, and to establish it upon a thoroughly scientific basis.

He found that fresh saliva mixed with sugar or starch invariably became acid in four or five hours—whether the experiment was performed in the mouth by means of a small tube attached to a tooth, or out of the mouth, the mixture being kept at blood temperature; when the saliva was subjected to a temperature of 100° before mixing with the starch, no acid was produced. When the starch alone was submitted to a much higher temperature than this, acid was still produced, showing that the ferment was in the saliva, and not in the starch. By other experiments it was proved that the ptyalin of the saliva was not the cause of the acid re-action. By inoculating a sterilized solution of saliva and starch with carious dentine, or with saliva taken direct from the mouth, acid fermentation was produced, proving the existence in the mouth and in carious dentine, of an organized ferment capable of producing an acid reaction. By control experiments it was proved that sterilized cultivation tubes *invariably* became acid when inoculated direct from the mouth, the uninfected tubes remaining neutral. It was also shown by conducting similar experiments without the access of air, that, given the necessary food, this action can go in the deeper layers of the dentine excluded from the air—in other words, that some of the organisms found in caries were anærobic. Other experiments tended to show, that by the use of strong antiseptics in the mouth, combined with careful cleansing with tooth brush and silk, the amount of acid produced in specimens of saliva, tested, could be greatly reduced.

All the cultures made showed under the microscope a fungus, as either micrococci, diplococci, bacteria, bacilli, or thread forms. Dr. Miller ascribed all these forms as sometimes found on a single thread, which he considered to prove the genetic connection of the forms. He also concluded that it was only from carbohydrates, especially sugar, that this fungus appears to be able to produce acids in any considerable quantity at all. He finds, furthermore, that the "great majority of the fungi found in the human mouth are capable of producing acid from cane or grape sugar. In nearly all cases investigated this acid appeared to be lactic."

One link in the chain of evidence was, however, still wanting—could caries be produced out of the mouth artificially, imitating the conditions found in the mouth as nearly as possible? Dr. Miller answers this question in the affirmative, and has been able to produce artificial caries which is undistinguishable from natural caries under the microscope.

Messrs. Underwood and Milles, in a further communication contributed to the Odontological Society in 1884, described some experiments on the production of artificial caries, in which the results obtained were not identical with Dr. Miller's.

In their first experiment, malic and butyric acids were present in a flask with an infusion of meat and saliva, fragments of dentine were exposed to this fluid; but the change produced was only quite superficial, although the tubes were enlarged and contained a material that stained readily. It has been suggested that in this experiment the necessary food of the micro-organisms was absent, for albuminous substances, such as meat when decomposed in the mouth do not produce acids. They required starch or sugar as the material from which to form the acid.

In their second experiment in which putrefactive changes in the materials were allowed to go on for a considerable period, scarcely any perceptible change took place. It has been since suggested as an explanation of this result that putrefaction causes an alkaline reaction, and interferes with the acid-forming properties of the micro-organisms; an instance of putrefaction interfering with caries is seen in those cases in which a growth of suppurating gum has partially filled a large carious cavity, the caries is often arrested and the reaction at the margin is found to be alkaline.

In a third experiment in which fragments of dentine were exposed in a flask to a mixture of saliva and bread, a change was produced in the dentine, but Messrs. Underwood and Milles considered this change to be a very weak caries, if caries at all. In connection with this experiment it may be remarked that if the mixture was not often renewed the micro-organisms might soon be devitalized by their own products, so that while we should obtain decalcification, there would be no infiltration with micro-organisms. They came to the conclusion as the result of these experiments, that the process to be effective must be carried on in a living mouth, probably because that is the only situation in which the special germs are really active.

The researches thus described enable us to formulate a definite explanation of caries in relation to micro-organisms. It is now well established as first stated by Messrs. Leber and Rottenstein, and confirmed by Messrs. Underwood and Milles, Miller, and other observers, that in all cases of caries, micro-organisms are present, and without their presence caries never takes place.

The phenomena in dental caries may be divided into two stages; the first being a process of partial decalcification, and the second a stage of digestion and solution of the tissue.

The first stage of caries consists in a partial decalcification of the tooth substance by acids, these acids being formed in the mouth by a process of fermentation; this fermentation being the result of the action of micro-organisms on the sugar present in the mouth, either taken in as such, or as starch which is converted by the ptyalin of the saliva into sugar. Prolonged contact of the micro-organisms with the teeth is necessary to the first stage of caries, either by the lodgment of particles between the teeth or in fissures or depressions in their substance.

In the second stage of caries, such decalcification having occurred, the micro-organisms are able to penetrate the softened tissue, and feeding upon the sugar present in solution, form fresh acid in its substance, and especially in the tubules of the dentine, proliferate freely, expanding and dilating the tubes until they break into one another, destroying the matrix and causing complete disintegration of the tissue. According to Dr. Miller, several germs of the mouth possess the power

of dissolving albuminous substances and changing them into a soluble modification, and he therefore considers the second stage of caries to be a digestion process; the cartilage of the tooth being dissolved by a ferment similar to pepsin, just as albumen is by the pepsin of the fluid of the stomach. The same observer has never found a putrefactive organism in the deeper portions of carious dentine, and he does not consider putrefactive changes at all *essential* to caries. "The presence of putrefactive organisms, while it would accelerate the second stage of caries, could only retard the first." The acid formed in this fermentive process appears from the investigations before described to be in most cases lactic acid. The power of forming lactic acid from carbohydrates appertains to a large number of species of bacteria (Flügge).

It is well known that the growth of the bacteria is injuriously affected by the products of their own tissue change. Lactic acid, in the lactic acid fermentation is injurious even in the amount of 0.8 per cent. (Flügge). In experiments with lactic acid bacteria it has been found necessary, when the formation of lactic acid has reached this proportion, to neutralize the acid with chalk. There is evidence that in carious teeth the lime salts liberated form with the acid a lactate of lime, thus taking up the excess of acid formed and allowing the fermentation to go on unimpeded, the micro-organisms being set free from its inhibitory effects.

*(To be continued.)*

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## LEGAL INTELLIGENCE.

### Barrett v. Robinson.

THE action was brought by Edward Barrett, a farmer, against Leopold Henry Robinson, of the American Dental Association, to recover £250 damages for the alleged neglect and unskilful manner in which plaintiff had been treated by one of the defendant's servants.

Counsel for the plaintiff—Messrs. D. B. Sullivan, Q.C., and J. Deasy, M.P. (instructed by Mr. P. O'Hea, solicitor). For the defendant—Messrs. R. Adams, Q.C., and R. A. Powell (instructed by Mr. W. C. Cooke, solicitor).

The following jury tried the case:—Denis Dunlea, Maurice O'Donnell, James Higgins, J. O'Connell, Charles Draddy, Thomas O'Connor, David Bourke, John Cross, John Hodnett, J. L. Brogan, Denis Crowley, and H. N. Down.

Mr. DEASY opened the pleadings, and

Mr. SULLIVAN, Q.C., having stated the plaintiff's case—

EDWARD BARRETT, the plaintiff, was examined, and deposed that he was a publican, a farmer, and contractor for supplying stones to the Corporation. In February last he had a bad tooth, and there being an individual named "Sequah" in the town, he went to him to have the tooth drawn, but he only smashed it, leaving the stump in his jaw. Witness was suffering a great deal of pain from the tooth and went to the American Dental Association, and was conducted into a room by a lady named Gooldfoot, who brought an operator, who he believed to be Mr. Taylor. Witness related what had occurred while attending "Sequah," and the doctor said he would see what he could do for him and drew the tooth out with some difficulty. He, however, still felt pain, and asked the doctor for the tooth, which he gave him, when he discovered that it was the wisdom tooth he had drawn, which was perfectly good. Witness asked the fee and was told it was half-a-crown. He then inquired what the operator's name and address was, and he would make him pay for pulling out a good tooth. The operator then would not accept the money, remarking that he had not done with witness yet. Witness was afterwards examined by Dental Surgeon Butterfield, who told him to go to his medical adviser before he did anything. Subsequently Mr. Butterfield dressed the tooth which had been smashed by "Sequah," and he had not suffered since.

Cross-examined by Mr. ADAMS: "Sequah" is a Yankee operator? Yes. "Sequah" took out teeth for nothing? I think so. He took out your whole jaw for nothing? No, he did not. He left the jaw after him. The moment the operator commenced, you began to roar? I don't think so. Is it not a fact that the moment the victim roars, the band begins to play? I don't know that. Did you threaten to beat "Sequah"? No. Did "Sequah" threaten to beat you? No.

Surgeon BUTTERFIELD deposed to Mr. Barrett coming to him on the 10th February, and having a tooth dressed. Wit-

ness found him suffering severely, and from the appearance of the tooth, it must have been drawn with great force.

Cross-examined by Mr. POWELL: It was quite possible that in the extraction of the stump the wisdom tooth might be disturbed, but the tooth might also be drawn without doing so by means of the "elevator."

This closed the plaintiff's case, and Mr. ADAMS having opened the defence—

Mr. FREDERICK TAYLOR was examined, and stated that he was a dentist and held the diploma of the Royal College of Surgeons, and was for a time an examiner in the College. Plaintiff called at premises of the American Dental Association, and on witness examining him he found the upper molar smashed and the gum severely lacerated. Plaintiff told witness he had attended "Sequah," and witness observed that the wisdom tooth was loosened, which he (witness) then extracted to enable him to operate on the stump. The "elevator" could not have been applied without causing great pain. Witness told Mr. Barrett that before he could remove the broken tooth he would have to remove the wisdom tooth, and the latter did not dissent from this course.

PATRICK WHELAN, assistant in the establishment, gave corroborative evidence.

EDWIN ALFRED CORMACK said he was a licentiate of the Royal College of Dental Surgeons, Edinburgh. He heard Mr. Taylor's evidence, and assuming it to be correct, he considered Mr. Barrett had been treated properly.

Counsel for both sides next addressed the jury, who were charged by his lordship and retired, and after an absence of half an hour returned into court with a verdict for the plaintiff with five guineas damages.

Mr. ADAMS applied that the plaintiff should not be allowed his costs, inasmuch as the action had been brought first in the Quarter Sessions Court and had been allowed to go by default.

His LORDSHIP refused the application.

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### Regina v. Horton.

GEORGE DAY HORTON, chemist, Aston-road, was summoned on behalf of the Dental Association with unlawfully using the title of "dentist" without being registered, contrary to the

Dentists Act 1878, on the 17th July. Mr. H. B. Dain (Messrs. Milward and Co.) appeared for the prosecution, and Mr. Parfitt (instructed by Messrs. Cottrell and Sons) was for the defence. For the prosecution it was pointed out that prior to the passing of the Dentists Act in 1878 it was competent for any person to describe himself as a dentist; but since the enactment it was necessary for every person using such a title to be registered. In support of the summons it was submitted that the defendant sold two articles which bore labels with the name "G. D. Horton, Practical Chemist and Dentist," attached. The matter was brought before the Dentists' Association by Mr. Eli Wright, who carries on business as a dentist and chemist near to the defendant's house. Mr. Parfitt said that the labels had been used inadvertently and against the wish of the defendant. A fine of 20s. and costs was imposed, Mr. Hill suggesting that any labels bearing the word "dentist" should be destroyed. Mr. Parfitt: That shall be done, your worship."

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## HOSPITAL REPORTS AND CASES IN PRACTICE.

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### Two Cases of Strumous Abscess and Bone Disease treated with Glycerine and Iodoform at the Royal Free Hospital.

UNDER THE CARE OF MR. BARROW.

CASE I.—R. M., æt. twenty-six, a labourer, was admitted on May 19th, 1890, with an abscess of the lower jaw. The hindmost molar on the left side had been painful for three weeks; the abscess had been opened on May 14th, and a considerable amount of pus escaped, the pus continuing to come away daily, but in diminishing quantities. At the time of admission there was rather a large swelling below the level of the jaw on the left side, and the patient was unable to open his mouth to any extent. The wound was dressed and a drainage tube kept in, which, however, was not found to give a free exit to the pus. On examining the wound some days later, Mr. Barrow found that the sinus led upwards towards the posterior part of the jaw, and on syringing the wound the patient said he felt the lotion come through into his mouth through the bad tooth.



On the 28th, the man having been anæsthetised, Mr. Barrow enlarged the openings, and on exploring found the bone to be bare of periosteum; the molar tooth was extracted with some difficulty, and a few small pieces of bone came away; it was then found that the pus had burrowed as far as the articulation, so another opening was made horizontally at that level; the wounds were then syringed out with a lotion of 1-1,000 hydrarg. perchlor., and stuffed with glycerine and iodoform gauze. From this date the wounds gradually closed, the communication with the mouth becoming less and less till it quite ceased, and the pain at the articulation disappearing by degrees.

On July 2nd the patient was discharged perfectly cured.

CASE II.—The patient, E.F., a girl, æt. thirteen, was admitted on May 7th with strumous disease of the first metatarsal bone of the left foot. There was a history of enlarged glands of the neck some months previously, and about the same time she noticed a lump on the inner side of her left foot, which, however, had caused her no pain nor inconvenience till lately. On admission there was a hard diffused swelling over the first metatarsal bone extending into the sole, tender about its centre where fluctuation could be detected.

On May 10th the patient was anæsthetised, and Mr. Barrow made an incision about  $1\frac{1}{2}$  inches long over the inner side of the metatarsal bone, a little thin pus escaped, and on introducing the finger a small hole could be felt in the bone just beneath the seat of the fluctuation, this was scraped with a sharp spoon, and a considerable quantity of caseous material and broken down bone removed; as the mischief seemed to extend further, the incision was continued downwards, and the diseased tissue scraped away, only the shell of the metatarsal bone being left, a thin piece remaining between the cavity and the metatarso-phalangeal joint, the tarso-metatarsal joint also just escaping. The wound was then thoroughly washed out with hydrarg. perchlor. lotion, stuffed with glycerine and iodoform gauze, and the foot placed in a right-angled splint. The wound healed without a bad symptom, and the girl was discharged cured on July 11th.—*The Medical Press.*

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

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Bromide of Ethyl as an Anæsthetic.

DR. THOMAS FRANK, of Torontal-Szécsány, in Hungary, has employed, it is stated, with great success, the inhalation of bromide of ethyl for anæsthesia during operations on the mouth. In one case the patient, though he felt no pain during the removal of a sarcomatous epulis, did not entirely lose consciousness, as he spat some blood when requested to do so, and when at the commencement the breathing stopped, he resumed it in reply to directions.—*The Lancet*.

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"Sequah, the Prairie Flower."

MUCH amusement and instruction may be derived from a perusal of the *Wexford Free Press* which sets forth the proceedings of the Kilkenny Board of Guardians at their August meeting. It appears that there has been a visitation of "Sequah" to the city of Kilkenny, and the usual scenes have been enacted. "The maimed, the halt, the lame and the blind" assembled, with crutches, eyeshades, splints, and so forth as the evidences of their locomotor and other incapacities, and they were duly "hooshed" into the Sequah carriage by the arms of sympathetic bystanders, rubbed with the prairie flower, restored to vitality, and sent on their way bereft of crutches, and rejoicing, and from that day afterwards they were seen walking the streets with gratifying agility. Three of these patients, however, it appears, were in receipt of poor-law outdoor relief in consideration of their decrepit condition, and the Guardians seeing them well able to walk the streets, and to work if they pleased, stopped their weekly allowance, on which they appeared before the Board to show cause against the stoppage. The first of them, being confronted with the fact that he had been seen about the town without the stick which he had always carried as long as the Guardians subsidised him for doing so, pleaded that while "Sequah" was in the town he had been obliged to get along without artificial aid, because if he was seen using the stick he would have lost the daily wages which "Sequah" paid him. He asserted that that distinguished medicine man from the Far West was in the habit of renting cripples, who appeared amongst the crowd, were duly "hooshed" up, rubbed and cured, and got two shillings for every day afterwards during the visit of the apostle of healing, on the strict condition that they carried no stick and walked with carriage erect, so as to do credit to the "prairie flower." Another of the patients stated that if any of them absented himself for a day from the show he received an immediate post-card requiring his attendance. We, of course, do not vouch for the truth of the statements of these persons, having ample experience that the word of an outdoor relief pauper is not good for much, especially when money is in the question, but we think it well to give our readers the opportunity of judging for themselves.—*Medical Press and Circular*.

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Death under the Administration of Ether.

ON Thursday, August 28th, Mr. W. H. Phillips, the Borough Coroner for Wolverhampton, held an inquest on the body of Albert

Bate, twenty-one, a journeyman miller, whose death had taken place the previous evening in the operating theatre of the Wolverhampton and Staffordshire General Hospital, under somewhat unusual circumstances.

The coroner in opening the inquiry, explained that the information he had received was to the effect that the deceased young man had died suddenly at the hospital whilst undergoing some operation, and immediately after the administration of ether to produce insensibility. In cases where death took place under such administration, it was very desirable, in the interests both of the authorities of the hospital and the public, that the fullest possible inquiry should be held.

Mr. Arthur Henry Hunt, house surgeon at the hospital, stated that deceased was first admitted into that institution in May last. He was suffering from a swelling on the outer side of his left knee: it turned out to be a chronic abscess. The witness then detailed the circumstances of the case, which it is unnecessary to give here, as they will be found fully described in a letter from Mr. Hunt which we print in another column.

Mr. Vincent Jackson, senior honorary surgeon at the hospital, stated that the deceased had been a patient of his, and had been under his regular observation since his admission to the hospital. He considered that the abscess on the knee indicated constitutional weakness. Witness had prescribed for him, and directed what should be done. He was present on the two previous occasions, and performed the operation spoken of by the last witness, the patient being under the influence of chloroform and nitrous oxide respectively. On each occasion the administration was perfectly satisfactory; no dangerous symptoms presented themselves, nor was anything noticeable to preclude the patient being put under similar influences on the occasion of the operation on Wednesday. Witness was not aware, however, of the operation that was performed on Wednesday until afterwards. It was one of a simple nature, and might safely be left to the discretion of the resident surgeon. From what he knew of the patient's condition it was a proper thing for the house surgeon to do what he did, and witness could not suggest any additional precaution that he should have adopted. Mr. Jackson went on to say that by directions of the coroner he had made a *post mortem* examination of the deceased. He found on the outside of the chest a considerable layer of fat, and the muscles were slightly paler in colour than they might have been. The left lung was found to be healthy throughout, and so was the left pleural cavity. The right lung was also healthy, but it adhered to the wall of the chest on the right side, and the pleural cavity on the right was also closed by adhesions. The pericardium was entirely filled by the heart, which was unduly covered with fat, especially at its apex. The right side was found to be dilated and full of blood, but the left side was empty. The right ventricle was distended with blood, and its walls were thin. The internal valves of the heart were healthy, but the muscular substance of the organ was pale to the eye and soft to the touch, indicating fatty degeneration, which was also clearly shown when a minute portion was removed, and subjected to examination under the microscope. In reply to the coroner, witness said it was impossible to say definitely how long this fatty degeneration of the heart had been going on, in all probability for the last few months. He considered the deceased had a natural tendency thereto. He died from syncope, or fainting.

It was one of those casualties that must occur every now and then. He did not believe that any examination of the patient previously to the administration of the ether would have enabled the operator to detect the existence of the disease which the *post-mortem* examination revealed, and no one would have suspected the existence of such a state of things in so young a man. Supposing he had been administering the ether himself, he should not have thought it necessary, under the circumstances, to do more than was done. He considered also that the selection of ether instead of chloroform was very judicious, as chloroform was depressing in its effects, and ether was stimulating. The heart weighed eleven ounces. Witness did not think that any patient in the hospital was placed under the influence of an anæsthetic without previous examination. That was the general rule, and was done so in the case of the deceased when he was operated upon. At the same time the knowledge that a patient was suffering from fatty degeneration of the heart was not prohibitive to his being put under the influence of an anæsthetic.

The jury returned the following verdict :—"That the deceased died from syncope or fainting whilst under the influence of ether, and whilst undergoing an operation at the hospital; that at such time he was suffering from fatty degeneration of the heart; and that his death was the result of natural causes."—*The Lancet*.

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## OBITUARY.

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IT is with extreme regret that we have to announce the death of William Henry Woodhouse, L.D.S.I., on the 18th of August, aged sixty years, at his country house, The Hall, East Ilsley, Berks. About a week before his death he took a severe chill, which resulted in congestion of the lungs; his condition gradually became worse until the morning of the 18th, when he peacefully passed away. He leaves a widow and eight children. He was associated in practice for more than thirty years with his brother, A. J. Woodhouse, practising with him at No. 1, Hanover Square, London. He became a member of the Odontological Society in 1866, being a member of the Council from 1880 to 1881, and for many years he was a constant attendant at the meetings, though he did not take an active part in them. He was also a member of the British Dental Association from its foundation. All who knew him must regret the loss of a most agreeable friend, his bright good-humour being a strong feature in his character.

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## REVIEWS AND NOTICES OF BOOKS.

DENTAL SURGERY, BY HENRY SEWILL, M.R.C.S., L.D.S.Eng.  
Baillière, Tindall & Cox, 1890, pp. 400.

Mr. SEWILL's third edition is scarcely really a third edition, but rather a new book altogether; with new publishers, new printers and abundance of new material the book will occupy a different position from its predecessors, and deserves to be considered as a fresh work. Mr. Sewill possesses two essential qualifications, without which all the learning in the world would fail to produce a valuable text-book, one of these is that he scarcely ever, if ever, writes obscurely, but takes infinite pains to make his meaning clear and his language concise; and the other is that he spares no pains and no expense of time or money in obtaining the best assistance from contemporary workers in special departments of the science of which he writes. The result is that the book is a really valuable addition to dental literature, and in some departments at least is fairly in advance of the other hand-books.

Our science is widening in all directions, and it is easy to see that with the large amount of progressive work that is being energetically carried out in all directions, the day is past when the science and practice of dental surgery could be conveniently condensed into a single hand-book, or for the matter of that, exhaustively treated of by a single individual. Mr. Sewill has recognised this fact by suppressing a great deal of the former editions, which dealt with matter which may be more conveniently left to text-books of anatomy. On the other hand, the pathological portion of the work has undergone considerable amplifications, and it is here that we think the greatest interest of the present volume is to be found; in fact, we should not be surprised if in a future edition Mr. Sewill were to devote the whole of the work to dental pathology.

The chapter which deals with the pathology of dental caries is in our opinion the most accurate account of this important subject that has yet appeared. The revolution of opinion that has crept over us since in 1881 the micro-organic theory was so universally decried in almost all quarters (especially America), and that has resulted in its firm establishment in all scientific circles, is traced with clearness and

impartiality. Nor has Mr. Sewill rested content with collating current opinion ; he has spent considerable time in verifying observations and repeating researches that seemed to him to require confirmation. Moreover, he has imported new talent into the field by employing microscopical and bacteriological experts, to whom he has supplied the special facts and who, under his supervision, have done much useful work in the direction of culture as well as examination of caries, natural and artificial. The result of all this labour has been that the chapter on caries forms the most valuable portion of the book.

The treatment of caries is a very different subject from its pathology, so different indeed that it is difficult for one man to write both up to an equal standard of excellence. The question of treatment involves the greater part of operative dentistry ; in face of the present rapid development of operative procedure of all sorts it is almost, we might say, quite impossible for a treatise of the present bulk to avoid the charge of being one-sided, there must be omissions, and impartiality can scarcely be hoped for. While, therefore, we cannot pretend that this portion of the work exhausts the subject, it maintains the merit of clearness and directness that are noticeable elsewhere. It may be open to question whether a book is the right medium for conveying knowledge of this very manipulative, intricate and progressing science ; we do not remember to have encountered any work in which the end has been attained. A word of praise is due, however, to the excellent drawings, that have been introduced with a view to illustrating general principles in gold filling, and in the application of the rubber dam ; whether anyone will learn how to perform the latter operation from a drawing, however good, must remain to many of us a matter of opinion. The anatomical chapters which preface the real business of the book are intentionally slight, and purposely limited as far as possible to matter bearing upon the pathological sequel, but they are illustrated with some new reproductions of microphotographs by Messrs. Pringle and Charters White, which are really splendid, and this brings us to speak of the illustrations of the work in general. We can say without fear of contradiction that these reproductions are the best thing in the way of illustrations that we have yet seen ; the photographing (often with high powers) has been splendid, and the

printing, the credit of which is due to Messrs. Bale and Sons, is really a work of art. These representations of nature, as it really is, make the old cuts from time-honoured sources look almost ridiculous. Compare fig. 6 with fig. 8, figs. 22 and 23 with fig. 21; the "tobacco pipe" appearance in fig. 105 with the same thing as shown in the cut on page 131; in fact compare any of these realities with the attempts of older writers to draw them, and we cannot doubt that the days of the older semi-diagrammatic illustration are numbered.

We cannot close this necessarily brief notice without a word of praise to the printing. We know that Mr. Sewill is hard to satisfy, but we think both he and his readers may well be satisfied with the manner in which Messrs. Bale have achieved their part of the work (no unimportant one) entrusted to them. As a last word, if, as we should predict, the present edition speedily becomes out of print, we should advise the author to curtail more and more the operative details, and devote still more of his space to pure pathology, in which field we think he has yet much valuable work to perform.

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### MICROSCOPICAL AND LABORATORY GOSSIP.

WE are indebted to Mr. Howard Mummery for the following communication:—"In reply to Mr. Caush's enquiries concerning Wiel's process, I write to say that I use a saturated solution of corrosive sublimate in water. I have tried several strengths, but find this to give the best result. I should think that methylated spirit would do perfectly well for the first stages, although I have myself always used diluted proof spirit in the method I have described. During the Congress in Berlin, I have met Dr. Wiel and discussed the process with him. He does not appear to have anything to add to what has already been published, the stain he still uses being borax carmine. I have failed to obtain any good results with hæmatoxylin, this not appearing to stain in bulk in this process. With aniline blue-black, however, I have been very successful.

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Mr. DAVID HEPBURN forwards us the following case:—A LADY of middle age, with an apparently edentulous, but to all appearance healthy and normal upper jaw, has for

some years worn an upper suction plate, but always with more or less discomfort and pain, which all ordinary treatment failed to alleviate. On examining the gum recently a minute opening was discovered, this being enlarged and a probe passed, enamel could be distinctly felt. The patient was then placed under an anæsthetic, and with some difficulty a large and well-formed canine tooth was removed from the substance of the bone. After a few weeks the suction plate was re-adjusted, and has since been worn without any discomfort whatever.

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AN Eastbourne paper recently gave an account of a man who, suffering from distressing head symptoms, endeavoured to end his troubles in an original way, by driving nails into his skull, some of which entered the brain. The nails, however, were removed by a surgeon, and the patient made a good recovery, and stated that all his painful symptoms had passed away. A correspondent desires to know if it is on the same principle that toothache is cured by driving hickory pegs into exposed nerves?

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### NEW PREPARATIONS.

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WE have received from Messrs. Burroughs and Wellcome some new preparations, which may prove of service to our readers. *Iodic Hydrag.* is a combination which has found favour with the authorities of St. Mary's Hospital as an antiseptic and germicide of considerably greater power than corrosive sublimate. It does not precipitate albumen, and deserves a trial as a root dressing; 1 in 4,000 is about the strength to use.

*Cocaine tabloids.*—This is simply a very convenient form of cocaine for making a solution, each tabloid contains one-half of a grain, and can be dissolved in water which should have been previously boiled. It seems an excellent plan for keeping cocaine intact.

The same firm have forwarded us a dentifrice which they call "salodent." It is described as containing salol eugenol and other agents, and to have germicidal properties. It is not unpleasant to the taste, and acts promptly and efficaciously in removing unpleasant odours from the mouth.

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### ANNOTATIONS.

UNDER the head of Legal Intelligence will be found the history of an unfortunate man who having a bad tooth went to Sequah, by whom, he said, the offending member was smashed; he then sought relief from an American Dental Association, where, according to his own account, a sound tooth was removed and the relic of Sequah's failure left untouched. The victim subsequently obtained relief from a registered practitioner and a jury awarded him £5 damages against the American Dental Association, for neglect and unskilful treatment. No doubt there are plenty of similar histories which never get into print. *Experientia docet*, saith the proverb; perhaps so, but it is a very slow process.

MR. G. CUNNINGHAM's course of lectures on operative dental surgery at the National Dental Hospital, will this winter include the following special subjects:—1. The practical application in the treatment of carious teeth of recent investigation on micro-organisms (there is a possibility that this lecture will be delivered by Professor Miller, of Berlin). 2. Rotary method of gold fillings. 3. Porcelain inlays in gold fillings. 4. Compressed gases as local anæsthetics. The course will begin on October 6th, at 6.30 p.m., and be continued weekly until Christmas; each lecture will occupy about an hour and a-half. The fee for the course is £2 12s. 6d.

WE learn that the Medical Department of the Russian Ministry of the Interior have issued a decree to the Governors of the various provinces, in which they say:—"Considering the evils resulting from a public display of hypnotism, public *séances* of hypnotism and magnetism are forbidden. Secondly, the application of the method to therapeutic purposes is only to be permitted under the conditions applying to operations—namely, in the presence of several doctors."

THE Russian Medical Department has also issued an order that druggists are on no account to dispense medicines on the prescription of dentists.

A NOTICEABLE feature at the Exeter gathering was the very distinguished company that were entertained by the Association at its annual dinner. Not only were many of

the guests distinguished by rank and attainments, but they displayed an acquaintance with the pressing questions of dental politics that was deeply gratifying to us all. The excellent speeches contributed by our guests not only aided to make the evening a success, but plainly demonstrated the fact that influential peers and distinguished officers who had attained high rank in the sister services, were keenly alive to the importance of the struggle that our Association is carrying on, favouring its aims and conversant with the arguments upon which it bases its claim to public attention. This is very inspiring and encouraging, and will give our reformers new energy in the prosecution of their good cause.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

### The L.D.S. Diploma.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The thirst for distinction doubtless is human, and honours rightly conferred serve a useful and necessary purpose as a stimulus to enterprise, industry, and work. Honourable symbols, however, conferred on unworthy objects, become lowered in value to the worth of the object, or person, to which it has been applied.

That the L.D.S. then, should be deemed unsatisfactory as a distinguishing mark of ability, I can well understand, for as the strength of the chain is exactly that of its weakest link, so the value of this title must be estimated, not by the curriculum requirements and searching examination of the English College, but according to the standard demanded by the least exacting of the colleges.

Judge of it then from the following facts, related to me by a practitioner present at the Annual Meeting of the British Dental Association at Exeter. In 1881, being a chemist, and having registered as a dentist, he decided to commence practice as such; but, knowing nothing of dentistry he thought it might add to his success to be decorated with the dental diploma, so he crossed the Irish sea, gave himself a ten day's "coaching," and duly presented himself before the Examining Board. Of the questions put, he says, he knew next to nothing, and when a set of instruments were placed before him to name their uses, he bluntly confessed entire ignorance respecting them. For his honesty in answering, I presume, these honest examiners awarded him, to his great astonishment, the L.D.S.

My friend's integrity did not rest here, however. He felt that the possession of this coveted distinction had not fitted him for the practice of Dental Surgery. He consequently relinquished ideas of present practice, went to London and entered the hospitals and the curriculum course of study. In due time he obtained the L.D.S.Eng.

The pleas urged in justification of this wholesale levelling up, does not justify the total destruction of a title which was intended to be, and which formerly was a mark of honourable distinction to its possessor. The L.D.S., *sine curriculo*, is now justly shunned by men of character and ability, who prefer being without such questionable adornments, but who are none the less respected and honoured by their fellows and by the public.

Sir, is not this trailing in the mud of the L.D.S., the true cause of the dissatisfaction with the present state of things, and of the call for a higher qualification in Dental Surgery? For ever put a stop to the *sine curriculo* business, and obtain a uniform standard of examination and a Central Examining Board, and in a few years the L.D.S. will again assert itself to be of full value. Nor is it seemly that in a branch of science so limited and circumscribed as Dental Surgery is, that a second qualification should be given. In the case of medicine, where the field is so wide and inexhaustible that no human mind can compass the whole, and where so much waits to be discovered, higher qualifications serve their true purpose in encouraging enterprise, research and learning.

Let us unitedly aim at making the L.D.S. of the highest possible value, that no other qualification can surpass it, and whilst men of ambition, of greater ability, and more favoured opportunities join to it other marks of distinction in arts, in medicine, or in general science, these do not detract from, or dim the lustre of the L.D.S., but rather add dignity to it by the association, so that instead of regarding with unworthy feeling those who have obtained these lateral distinctions, we should consider ourselves as deeply indebted to them as a profession, for bridging our isolation and joining us to the more ancient and better recognised institution of general medicine.

Cardiff.

I am, &c.,

J. C. OLIVER.

### The Association and its Branches.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—If it were not for the fact that ill-timed, ill-advised, or unfounded fault-finding must tend to injure our institution, and were it not for indignation excited by the persistent, ungrateful grumbling which by some individuals is considered a proper return for the ungrudging self-sacrifice of our respected leaders—if it were not for these considerations, the delicious lack of logic, the inconsequential reasoning and the vague, half-expressed, ill-considered projects boldly set forth in letters such as that appearing under the above heading in this month's Journal, could excite nothing but amusement. A president of a Branch makes—among other similar statements—a deliberate charge, that at meetings of the Representative Board provincial members are uniformly voted down by a majority formed by metropolitan delegates. It is then pointed out in reply that this charge cannot be true, since with rare exceptions the meetings are composed of a majority of provincials. An error of this kind, one might have expected, would on exposure have led to frank apology on the part of its utterer, but

for such an apology it appears we must look in vain. One would like to know with what code of gentlemanly conduct such procedures are reconcilable. The error is not atoned for, on the contrary, a supporter comes at once forward with an attempt to reiterate the charge in another form. It is difficult to follow his reasoning. "Although," he says, "it is very easy to recognize the force of the facts" (*i.e.*, that the majority at the Board meetings are almost always provincials), still "he cannot help feeling they (the facts) are very misleading and not very accurate!" In a similar spirit, whilst disclaiming the intention "to cast any reflection personally on our committees and voluntary officers," he accuses them, in fact, of the most petty narrowness, implying that these men, disregarding the known views of the bulk of our Association, constantly ignore those views, and force forward their own plans.

When he tells us what he means by a responsible editor, and in what sense the present editor is irresponsible, we may be able to consider the desirableness of making a change. So with regard to a paid secretary—How is such a secretary to be paid out of our insufficient income? Is he to be a member of the Association? and in what way would he be likely to excel in zeal, discretion, power and ability, the distinguished men who have hitherto given us their services gratuitously.

August 20th, 1890.

— AN OBSCURE MEMBER.

### A Correction.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Will you allow me to correct a meaningless simile which I am reported to have uttered at the late Annual Meeting of the Southern Counties Branch at Kingston-on-Thames.

The error is at the commencement of page 466 of your last issue, wherein I referred to wearing the honour of my nomination as "President-elect," not "as a delicate rose," but in the words of George Eliot:—"As some delicate robe brocaded o'er with names 'twere sin to tarnish."

By kindly inserting the above you will greatly oblige,  
September 4th, 1890.

Yours truly,  
GEORGE HENRY.

### APPOINTMENTS.

ROBERT J. SURMAN, L.D.S.Irel., has been appointed Hon. Dental Surgeon to the General Infirmary at Worcester, and also Dental Surgeon to the Convent of St. Mary, Stanbrook, Worcester.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him  
• at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION  
A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 10.

OCTOBER 15, 1890.

VOL. XI.

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**The Dental Association of Victoria.**

THE first presidential address delivered to the Dental Association of Victoria by Dr. Springthorpe will be read with unmixed feelings of gratification by members of the British Dental Association. The story so clearly and simply told of the passing of the Victorian Dental Act, and the labours, so successfully carried out, of those to whom was entrusted the task of guiding the profession in Victoria through the early stages of its organisation, will be read with the deepest interest and the most heartfelt sympathy by those of us who are familiar with the history of our own inception ten years ago. The story is in many respects so kindred to our own, and the difficulties so similar, that it seems almost like reading our own history over again—with this difference, that our colonial friends

have had the advantage of being able to guide their course, to some extent, by the light of our successes and failures, and thus, no doubt, to simplify their own procedure.

The first years since the passing of the Act—since, in fact, the profession in Victoria has enjoyed a recognised existence—have been marked by a splendid list of achievements. After the passing of their dental act a board was appointed to superintend the working of the Act; some 500 dentists were registered; a curriculum was elaborated which, following pretty closely on the lines adopted in this country, is thorough and practical; a Dental Association has been inaugurated and, under its auspices, rules were laid down for the establishment and working of a dental hospital, and a committee of management for the new institution was elected. Any one who has the slightest acquaintance with the jealousies, the ignorance, the interested opposition, and what is worse than all, the apathetic indifference or half-hearted support that such schemes of public reform are always destined to meet with, will acknowledge that Dr. Springthorpe, speaking for himself and his colleagues, may well have pointed with some pride to such a list of results during their brief tenure of office.

One salient difference will be noticed between the government of dental matters in Victoria and in the United Kingdom, namely, that whereas our act is carried out by the General Medical Council, the colonial act is administered by a dental board consisting of four dental and three medical practitioners and a representative chemist. In every country requirements are different, and after ten years of administration we are fain to confess that our representatives on the Medical Council—that is, the representatives of the bodies that grant our diplomas—have watched well our own interests; still the presence of a large proportion of dental surgeons on the dental board of

Victoria may result in the more rapid evolution of dental questions.

In other respects the differences between the Victorian and the British Dental Association are mere matters of detail, and there are surprisingly few even of these. It is the resemblances, not the differences, that are uppermost in our minds at present. The spectacle of our colonial fellow subjects working out their destiny, as we were working out ours a few years back, suggests irresistibly the question whether the two Associations, so closely bound together by common aims in the furtherance of a common cause, should not be formally united by some definite form of alliance—may we use the word “federation”? The Victorian Society is the junior of ours by some ten years, so that perhaps it would be no derogation to the dignity of that body to affiliate itself to the British Dental Association. There can be no doubt that the movement for dental reform in Victoria has the right kind of ring about it: there is no toleration of unprofessional methods to be detected in their schemes and regulations; we do not find the odious patentee dentist, the burlesque scientist, and the enterprising tradesman occupying the places of distinction in their councils. Professional spirit, as it is recognised and respected here, seems to imbue those to whose lot it has fallen to shape the destiny of their profession in Victoria, and we gladly stretch out a cordial hand of fellowship, and freely give expression to the hope that our two Associations, which are already cemented by zeal for a common cause, may ere long be united by definite federation.

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## ASSOCIATION INTELLIGENCE.

## The Annual General Meeting.

*(Continued from page 595).*

Mr. COXON next read his paper on "The Teaching of Mechanical Dentistry to the coming Dental Student," which together with the discussion which followed, will appear in a future number.

A discussion on "Crown, Bar and Bridge Work" was opened by Mr. J. H. Gartrell, of Penzance, whose MS. not having reached us, we print the discussion which ensued upon it.

Mr. SMITH TURNER, who occupied the chair in the temporary absence of the President, said he had looked forward to a discussion as to the propriety of the method mentioned by Mr. Gartrell for setting artificial teeth. On that point there was great diversity of opinion, and he thought the gentleman who had promised to open the discussion, and who had shown remarkable skill in applying bridge work to the teeth, would have entered into the merits of the system, and would have shown how far it did not discredit itself by the destruction of good material in some instances; and how far it maintained its reputation and was a permanent source of benefit to patients, by not putting too much strain on any roots which might be left in the mouth. He had also hoped that the mover would have given the members some idea of the utility of the system of work in question.

Mr. LENNOX then proceeded as follows:—

I shall have to presume upon your kind indulgence to allow me to read what I have to say. If I venture to take part in a discussion which has been so ably begun, my excuse must be rather the deep interest I have learned to take in such work than any other qualification for discussing it to which I can lay claim. At the same time, there are a few remarks which I am anxious to make, partly by way of advocating the use of bridge work in certain cases, but more especially in deprecation of its too frequent employment, and particularly in condemnation of some of the methods in vogue. Of the advantages of crowning teeth but little need be said. It must be a matter of general experience that where an isolated tooth is badly decayed in the crown, while the root remains healthy, a properly-made crown, which serves at once to replace the natural crown and to preserve the root, is in every way much to be preferred to a tooth carried



by a plate. The only possible objection arises on the score of cleanliness, but by using fine gold for the contour this objection is got rid of, and it is possible for a person wearing such a crown to keep the mouth at least as cleanly as he could with natural teeth, and far more so than too many of those who wear a plate are in the habit of keeping it. The question next arises, What method shall be adopted in making such a crown? and the answers given are unfortunately almost bewildering in their number. Probably, almost everyone who has much practice in such work has some pet method of his own, and it is much to be desired that there were a museum or something of the kind where specimens of the several methods could be brought together for comparison, so that those which are rather fanciful than useful or convenient might be weeded out, and some one or two methods, combining possibly the advantages presented by the rest, might be devised to the benefit of both operators and patients. Among the devices which appear to me quite unnecessary, is that in which a feathered post is adopted, with a view to preventing the possible rotation of the crown. Any device which calls for an undue enlargement of the canal is of necessity objectionable, and the risk of rotation is obviated without any enlargement by simply cutting down the anterior edge of the root somewhat further than the posterior edge, so that the surface of the root in contact with the crown is not exactly a plane. If this be done, so long as the post remains fixed, rotation is impossible, while, if the post becomes loose, the result is a failure, whether the post be feathered or not.

As to the form of crown, I much prefer an English plate-tooth to any all-porcelain crowns, such as the Logan or the Bonwill. In my opinion, a much better case can be made with a plate-tooth than with either of the last-named crowns, with the additional advantage that the backing of the plate-tooth can be used as an abutment for a bridge, when an all-porcelain tooth is useless. With regard to the method of mounting a plate-tooth, I strongly object to that of fitting a thin piece of platinum plate to the root, piercing a hole for the post, and contouring with small pieces of gold and solder—a method which seems to me both wasteful and unworkmanlike. Another method, which I should never think of adopting, is that with a tube and a split pin, and that for the simple reason that the split pin being removable, foreign matter finds its way into the tube, decomposes, and becomes offensive.

Before I pass on to consider the question of bridge-work, you will perhaps forgive me the egotism of saying that my partner and I have quite lately adopted a modification of the method of mounting a plate-tooth described in the Journal under my name, and that I have a specimen with me which I shall be happy to show to anyone who may feel interested in it. The method appears to us to give very satisfactory results, and lends itself very readily to the insertion of bridge-work.

Coming now to the consideration of bridge-work, I should like to express the deep sense of indebtedness I believe we all have towards Mr. Gartrell for his highly ingenious and workmanlike method of inserting a removable bridge—a method for which he will continue to be honoured in this country, if not in America, where some one has, I regret to say, had the dishonesty to publish it as his own. In cases where it is felt that removability is essential, it seems to me that no better method than this of Mr. Gartrell's can be desired.

But I am by no means of opinion that removability is always necessary or desirable. Take, for instance, the case (and I should use this same case as an answer to those who object altogether to bridge-work) in which a patient has lost the crowns of the four upper incisors, while the roots of the laterals remain sound. We have met with two such cases quite recently. In such a case the two lateral roots may be crowned with plate-teeth, and the two centrals may be supplied by soldering their backs to one another and to the backs of the laterals. The centrals can be so ground and placed as to press lightly on the gums so as to appear to grow out of them, and the whole of the exposed metal-work being of fine gold can be as easily kept clean as can natural teeth, from which the patient is soon unable to distinguish them. With such a method, removability becomes quite unnecessary, except in the case of fracture. To meet the latter case, some method of fixing the lateral crowns must be adopted which will admit of their ready removal when desired, and this can be secured by fixing with gutta percha. But, while I view very favourably the use of bridge-work in such a case, there are many others in which its use has been suggested, but to which I think it is entirely inapplicable, especially when the methods suggested are considered. Take, for instance, the case where the only possible abutments are a pair of sound molars. There are some who in such a case would not hesitate to cut and hack these

invaluable sound teeth in order to insert lugs or apply caps to support their own all too short-lived devices.

The patient, I would rather call him the victim, in such cases has for a brief while the satisfaction of feeling a sound denture restored to him, but finds all too soon that the bridge has broken loose, and that, having lost prematurely two good sound teeth, he is reduced after all to the use of a plate, which he had far better have had from the first. Nor is the objection entirely removed in the case of lugs, if we suppose the teeth used as abutments already partially decayed, for I do not believe that any lasting work can be obtained by such a method. What is wanted is a method of capping a molar which shall not necessitate the cutting away of the least particle of enamel or in any way injuring the natural tooth, and, until this has been found, I should say let bridge-work in such cases entirely alone, and I should say the same in any case where the use of pads is suggested. It is far better in all such cases to use a plate. On the other hand, wherever there are sound roots, which can be crowned to form the abutments, I believe the method of bridge-work can be advantageously employed, and, wherever it can, it is without doubt much to be preferred to the use of a plate, provided, of course, that it is so constructed as to be readily cleansed, whether in the mouth with a brush, or by being made removable. I am aware, of course, that those who object to bridgework do so very largely on this very ground, that it cannot be kept clean, but I do not think the case is quite so hopeless as they imagine. Mr. Gartrell has shown us one way by which satisfactory results can be secured, and I am satisfied that even in the case of molars a bridge can be so shaped as to admit of cleaning as readily as natural teeth.

In conclusion, I would like to suggest that it would be very interesting to have an exhibition of all the little appliances used in connection with this kind of work, because we all have our dodges for arriving at results, and the opportunities for communicating them to each other, as we are professionally bound to do, are all too few.

Dr. MELNOTTE, U.S.A., said he had not been very much in favour of removable bridge work, but in the cases mentioned by Mr. Gartrell it seemed to him that removable bridge work was just the thing. He had tried "saddles," in some cases to his sorrow, and he had carried bridge work to quite an extreme; perhaps, as far as it could be carried. He had met with a good

many mishaps, but with his successes he felt quite satisfied, and believed that they warranted him in proceeding with the work. He had a piece of bridge work made over seven years ago, and other pieces made four years ago. It had given him great satisfaction. He believed, having made a practical test of it, that bridge work was very much better than plate, because he tried plate prior to trying bridge work. Men who were not actually good mechanics, and were not capable of fitting the bands closely might, perhaps, experience a good deal of trouble in making bridge work. To him it had been very fascinating. He had found a very fine specimen of bridge work in England, and he believed that in this country, when bridge work became thoroughly established, very fine work would be done, because the dentists had kept up the lead in the matter of gold work. 'He was a firm believer in reasonable bridge work. A certain amount of bridge work was certainly performed in a manner which no one could approve of; it was not clean, and after a short time, had to be removed.

Mr. CUNNINGHAM pointed out in answer to the Chairman that he was very strongly of opinion that where it was possible removable bridge work was very much better than fixed bridge work. He was confident that bridge work intelligently applied was a good thing.

Dr. BARRETT, U.S.A., said he had been looking to the east for the dawn of the day when the dental millennium should be reached, and dentists arrived at a process which should be perfect. As regarded crown and bridge work, in America dentists were apt to become a little too enthusiastic at times—to overlook the work, and fall on the other side. They were apt to seize upon a new idea, and that had been the case with regard to crown and bridge work; bridge work more especially. He felt confident that in America the amount of evil which had been done by an extreme adoption of bridge work far exceeded the good which could be accomplished by it for some time to come. It was not the fault of the bridge work itself, but the fault of the men who had so terribly abused it. He did not condemn bridge work. He believed it had its place, and was going to stay. He believed the curriculum of all schools, whether English or American, must include the principles of bridge work. Crown work he believed to be exceedingly useful. He believed that with it they had attained an altitude in dental operations that could never have been attained without it. By means of crown work they

had been able to save a large number of teeth, which otherwise would have been irretrievably lost. A tooth that was reasonably firm in its socket could be made useful and ornamental by means of crown work, for a long number of years. The foundation of the whole process was the correct treatment of the root of the tooth upon which the crown was to be placed. If the work was properly performed it would last as long as the natural teeth themselves. While the dentists in America claimed to be in front in regard to the practical work of operative dentistry, yet in much of the mechanical work they were far behind.

The PRESIDENT, who returned to the meeting shortly after the afternoon's proceedings commenced, and relieved Mr. Turner, said that in the course of his own practice he had not used any bridge work at all. For constructing crowns upon roots, he had been in the habit of doing without that which was always a painful eyesore when seen, namely, a gold ferrule fitted round the neck of the stump. He had always been accustomed to using a screw pivot, although he preferred, if he could, using ordinary pin wire. He could fix upon one case in which he adopted that method twenty-seven years ago, and the work had not been disturbed in any way. He always adapted the surface of some stump a little arched and scooped out, as it were, on either side. As to bars, he thought they were very objectionable, as they did not give any masticating surface.

Mr. CUNNINGHAM proposed a vote of thanks to those who had contributed papers.

Mr. HAY seconded the proposition, which was heartily agreed to.

Mr. CUNNINGHAM next proposed that the thanks of the members of the Association be given to Mr. Morton Smale for his long and energetic services as Hon. Secretary. Mr. Smale's successor would, said Mr. Cunningham, find it hard to equal the attainments of the retiring Hon. Secretary.

Mr. CANTON seconded the motion, and said that no one except those on the Business Committee could have any idea of the enormous amount of work which Mr. Smale did.

The proposition was unanimously carried.

This concluded the proceedings.

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### Central Counties Branch.

THE Annual Meeting was held at 71, Newhall Street, Birmingham, on Saturday, September 13th. The Council of this Branch met at 10 a.m., and at 10.30 the Annual General Meeting of the members for business only took place. Mr. R. F. H. KING (Newark), President, took the chair. There were also present :—Messrs. Roff King, W. E. Harding (Shrewsbury), Geo. C. McAdam (Hereford), H. R. F. Brooks (Banbury), J. Hinds (Coventry), H. N. Grove (Walsall), W. Helyar (Bristol), T. Huggins (Toulouse), J. Humphreys, F. E. Huxley, F. H. Goffe, Charles Sims, Breward Neale, J. Mountford, A. Berlyn, G. F. C. Matthews, H. Hudson, Frank Cave B. Cave, J. E. Parrott, J. Westwood, W. Maden, F. R. Howard, F. W. Richards, A. Gray, Cyril Marson, G. Sims, Dr. S. W. Haynes (Birmingham), Dr. G. A. Phillips (Walsall), Messrs. Owen (Wolverhampton), J. L. Robertson (Cheltenham), C. Batten (Kidderminster), and W. R. Roberts (Lichfield).

The minutes of last meeting having been read, confirmed and signed, the CHAIRMAN called on the Hon. Secretary for letters of apology.

These had been received from the Mayor (Mr. W. Clayton), Sir W. Foster, Sir James Sawyer, Mr. Smith Turner, Mr. Morton Smale, Mr. T. H. Bartleet, Professor Windle, Dr. Orrock, Dr. Moyles, Mr. J. H. Manton (Wakefield), Mr. A. Levason (Hereford), Mr. F. J. Thorman (Leamington), and others.

The whole of the officers proposed by the Council for the ensuing year were unanimously elected, viz. :—Mr. Frank Cave (President-elect), Messrs. R. F. H. King and C. Sims (Vice-Presidents), Messrs. B. Neale and W. E. Harding (nominated for Representative Board), Messrs. C. Batten and W. R. Roberts (members of Council), Mr. F. E. Huxley (Treasurer), and Mr. W. Palethorpe (Secretary).

The HON. SECRETARY announced that the Council had elected Mr. J. Mountford and Mr. H. Hudson as members of the British Dental Association, and also as members of this Branch.

Mr. Hilder, Mr. Adams Parker, Mr. J. Westwood and Mr. A. Berlyn were elected as associates of this Branch.

The HON. TREASURER (Mr. F. E. Huxley) then read his report, which showed that, including a balance in hand of £1 2s. 9d., the receipts were £7 17s. 9d. The expenses being £5 19s. 7d. leave a balance to the good of £1 18s. 2d. Mr. Huxley explained that £4 was owing for subscriptions.

The report was adopted.

The CHAIRMAN then called on the Hon. Secretary for his report.

#### SECRETARY'S REPORT OF THE YEAR.

Three council and two general meetings have been held during the year. At the first of the general meetings held Nov. 28th, 1889,

Mr. F. W. Richards gave his notes on an obscure case of tumour, and showed the patient. Mr. Roff King exhibited some gelatine for duplicating models. Mr. Grove showed two models with hypertrophy of gums. Mr. F. E. Huxley gave notes and showed models of mouth with fracture of the neck of maxilla. He also read a short paper and opened a discussion on specialities in dentistry on which Mr. F. W. Richards, the Chairman, Messrs. Howard, Donogan, Goffe and Grove took part. At this meeting 15s. 9d. was collected in the donation box and sent to the Treasurer of the Benevolent Fund.

The second general meeting was held March 20th, 1890. A paper entitled, "Anglo and American Quackery : has the Dental Act of 1878 in any way diminished the nuisance? is advertising less prevalent now than it was formerly?" was read by the president, Mr. R. F. H. King. A discussion followed in which Mr. Humphrey Grove, Mr. Roff King and Mr. Sims took part. Mr. H. N. Grove gave his notes, and exhibited patient with a very successful artificial nose. Mr. R. Owen and Mr. Grove showed interesting models of regulation cases. Half a guinea was on this occasion placed in the donation box.

During this year the following gentlemen have been elected :—

Messrs. W. R. Roberts, J. E. Parrott, J. Mountford, H. Hudson (members of the British Dental Association). Messrs. Donogan, W. R. Roberts, J. G. Parrott, J. Mountford, H. Hudson (members of this Branch). Messrs. Orrock, Hilder, A. Berlyn, Adams Parker, J. Westwood (associates of this Branch).

Two resignations have been received, Mr. G. O. Richards, Mr. G. Dennis Vinrace.

This report was then adopted.

The CHAIRMAN in vacating the chair, said : There is not much in the past for us to review, but what we can look back upon is of a very satisfactory nature. We find our members are increasing, not only in quantity, but also in quality. I have to thank the officers of this Association for the great assistance they have rendered me during the term of my office—especially Mr. Humphreys and Mr. Palethorpe. I congratulate my successor on having such an energetic secretary at his back. The one thing above all others to assist a President, especially if he lives at a distance is an energetic secretary, and in Mr. Palethorpe such an officer is to be found. I thank you much for the honour and courtesy you have shown me, and I have a real pleasure in inducting my successor into the chair.

Mr. F. CAVE B. CAVE then took the chair amid applause, and in returning thanks said : I assure you I think it a very high honour to be selected so unanimously to the post of President. I shall not ask you to listen to a long address on subjects which have been threshed out at earlier meetings. You will all be anxious to witness the various demonstrations which have been promised, and I believe they will prove much more interesting than anything I can say to you. Few

men in this room have worked at dentistry as many years as I have. In 1858 I commenced working in the profession, and for the last thirty-two years I have worked hard for myself, perhaps, and also hard for the public. Without fear of contradiction I may say no science, or art, or industry has during that time afforded more relief to the suffering than dentistry, and for that, if for no other reason, it deserves the gratitude of the public. I think it only just and fair to our American cousins that they should receive from me a large share of the credit for this happy state of things, and I believe every dentist thanks America for the help she has given us in the development of our knowledge, and for the numerous inventions she has given us to help us in our work. At the same time we must not forget how much credit is also due to our brothers in England. To my mind the men who started this Association, which has done so much to elevate the profession, deserve more gratitude and generous recognition for their invaluable services than they have ever yet received. When I compare the advantages of the pupils in dentistry this day and those of thirty years ago, it makes me wonder that we old members have been able to get on as well as we have. I would congratulate my more youthful brothers. I do not wish to preach, but from experience we gather more knowledge than from our own efforts, and I would urge the young men who are present to take every opportunity of improving themselves in the profession. Make up your minds to do only the best work. Be always patient and kind, and gain the confidence of your patients by the most absolutely straightforward conduct. Let each one's aim be the advancement of his profession, and if each one can feel in the future that he has done something to lift his profession a little higher, he will feel the happier for the reflection. I would strongly recommend the young men who enter the profession to make a point of gaining the double qualification. In twenty years' time—aye, in ten years' time, I hope it will be a recognised thing for dentists to have the M.R.C.S. as well as the L.D.S. to their names. They would then be placed in a much better position with regard to the other branches of the profession. Hospital abuse is a subject prominently in my mind, but if we are to get through our programme I must now conclude, again thanking you most sincerely for the great honour you have done me.

The following demonstrations then occupied the attention of members, and were very successfully carried out.

Gold Filling, J. Mountford, L.D.S. ; Gas and Ether, G. A. Phillips, M.R.C.S., L.S.A., and H. N. Grove, L.D.S. ; Hypnotism applied to Dentistry, S. W. Haynes, M.B. ; Crown Work, F. R. Howard, L.D.S. ; Application of Electric Motor, Breward Neale, L.D.S. A number of interesting Microscopical sections, illustrative of Dental Anatomy and Pathology, were exhibited by F. W. Richards, L.D.S. and J. Humphreys, L.D.S.



The President announced that £1 15s. 6d. had been placed in the Donation Box in aid of the Benevolent Fund.

At 1.0 p.m. luncheon at the Grand Hotel took place, after which a visit was paid to Highbury to the grounds and beautiful orchid houses of the Right Hon. J. Chamberlain, who had kindly granted permission to the members to view, and to which Mr. Cave had made arrangements to convey gentlemen by brakes.

Then an adjournment was made to Woodfield, Woodfield Road, Moseley, the residence of the President-Elect, who most cordially invited the members to dinner, at 6 p.m. A large marquee was erected in the grounds.

Besides the dentists present, the following members of the medical profession accepted invitations :—Mr. Lawson Tait, Drs. Edward Malins, G. A. Phillipps, Savage, Suckling, Tunstall, G. Warden; Messrs. Langsford Clay, H. Eales, A. Gray, C. Huxley, Jordan Lloyd, Bennett May, and F. Underhill.

The host, having proposed the health of the Queen, Mr. LAWSON TAIT, in a humorous speech, gave "The Central Counties Branch of the British Dental Association." This was responded to by Mr. BREWARD NEALE.

Mr. CAVE proposed the toast of "The Visitors," which was responded to by Dr. MALINS for the medical profession, and for the other visitors by Messrs. A. COLEMAN and G. HUGGINS.

Dr. SAVAGE proposed the health of Mr. and Mrs. Cave and family, making special mention of the great interest taken by Mr. Cave in the work of the Association, and also of his kind hospitality.

Recitations by Messrs. JORDAN LLOYD and C. SIMS closed a most enjoyable day.

The lamented death of Mr. C. E. Greene, at Conway, was the subject of much comment and regret at the morning's meeting. He had arranged to give a demonstration of the Administration of Gas and Oxygen by Dr. Hewett's method.

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### West of Scotland Branch.

A MEETING of the West of Scotland Branch will be held in the Library of the Faculty of Physicians and Surgeons, 8, Vincent Street, Glasgow, on Friday, October 23rd, at 8 p.m.

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### Midland Branch.

AN informal meeting of members and associates of this Branch will be held at the Albert Hall, Albert Street, Harrogate, on Saturday, October 25th, commencing at half-past five o'clock. A paper will be

read on the "Treatment of Pulpless Teeth," by E. J. Ladmore, Esq., L.D.S. The meeting will afterwards be open for "Casual Communications," or the introduction of "topics" for discussion. A substantial tea will be provided at the Albert Hall, 2s. each. Time 4.45.

Forms of application for membership can be obtained of the Hon. Secretary.

Trains leave Harrogate for York, at 7.35; Bradford, 7.38; Leeds, Manchester Liverpool, &c., 8.23; Middlesboro', Stockton, Newcastle, &c., 8.20.

I. RENSHAW, *Hon. Sec.*

*Drake Street, Rochdale.*

## ORIGINAL COMMUNICATIONS.

### On the Agency of Micro-Organisms in Caries of the Teeth.\*

By J. HOWARD MUMMERY, London

(Continued from page 625.)

#### *Microscopical Appearances in Caries.*

We have to consider the microscopical appearances in enamel, in cementum and in dentine:—

*In Enamel.*—The enamel loses its transparency and the prisms are seen to be separated from one another; the elements of the fungus are only seen in the spaces formed by its disintegration, as there are no channels in its substance along which they can penetrate, its structure, in fact, does not admit of the proliferation of micro-organisms in the tissue. A dark colouration of the enamel is generally to be noticed.

Dr. Abbott, in a paper published in the *Dental Cosmos*, in 1879, in describing the decalcified portion of carious enamel, speaks of the readily stained masses of softened substance as protoplasmic bodies "embryonic corpuscles," which the change in the enamel caused by caries has brought into view. He considers this, as also a similar appearance in carious dentine, to be evidence of a high vitality in the tissues.

Other observers consider that these are irregular masses of

\* Read at the International Medical Congress, held at Berlin, August, 1890.

germs mixed with the detritus of the decayed tooth, that not being homogeneous they take up the colouring matter unequally at different parts and produce a false appearance of cells (Miller).

*Caries in Cement.*—When caries extends to the cementum, the organisms are found in the lacunæ and extending along the canaliculi.

According to the observations of Dr. Miller, the Sharpey's fibres in the cement become infiltrated with germs and dilated and the tissue lying between them dissolved.

*Caries in Dentine.*—The structure of dentine is eminently suitable for the proliferation of micro-organisms, and it is in this tissue accordingly that their effects can be best studied. If we examine with a low power a longitudinal section of carious dentine in a tooth in which the decay has commenced from a fissure in the crown, and which has been treated with fuchsine or gentian violet, it is noticeable at once that the stained portion has more or less the appearance of a cone, the most deeply stained part forming the base of the cone, corresponding to that portion of the dentine which formed the floor of the cavity of decay, and the apex of the cone directed towards the pulp cavity of the tooth.

On examination with a higher power, it is seen that the micro-organisms, usually either micrococci or rod-shaped bacteria, penetrate freely along the tubes of the dentine, in the more superficial portions being crowded together, and in the deeper layer of the tissue filling the tubes less completely, in some cases being reduced to a single line. The base of the cone is seen to be formed by the extension of the micro-organisms in a lateral direction along the fine terminal branches of the tubuli. The tubes are seen to be expanded at intervals into irregular globular or oval shaped spaces filled with micro-organisms; in many cases large cavities appearing where these have become confluent. These cavities breaking into one another, the whole tissue of the dentine becomes broken down and gradually destroyed. We frequently see groups of canals filled with organisms lying in spaces of the dentine apparently free from infection, in other cases the matrix seems to have disappeared and the whole of the dentine in the part examined to be a mass of micro-organisms. Leptothrix threads are especially noticeable on

the margins of the preparations where their invasion of the decalcified tissue is marked by bundles of threads penetrating for some distance into the dentine.

Specimens are met with where the leptothrix threads penetrate the tubes to a considerable depth, some specimens showing leptothrix threads throughout, to the exclusion of other forms. Mixed with the leptothrix filaments are often seen small round points which may easily be mistaken for micrococci; these are cross sections of the leptothrix threads as may be seen by altering the focus of the objective. Cocci and short rod-shaped bacteria are, however, the forms of micro-organisms usually found in the deeper layers of the dentine. In many specimens some tubes are found filled with micrococci, and others in their neighbourhood filled with bacilli, and according to the observations of Dr. Miller single tubes are found in which both micrococci and rod-shaped bacteria are seen. Interglobular spaces so often found in teeth immediately below the enamel, play an important part in caries by increasing the porosity of the dentine and leading to its rapid disintegration in a lateral direction; being one reason of the undermining of the enamel so common in caries commencing at the masticating surface.

Dr. Miller describes germs as penetrating into the interglobular spaces, but in the many specimens I have examined showing these spaces, I have never seen them occupied by stained micro-organisms, those contained in the tubes seeming to be arrested at the interglobular spaces, and it does not appear as if they proliferated within them. Some specimens show a curious transverse splitting of the matrix at right angles to the tubes, oval spaces being formed having a very characteristic appearance.

Mr. C. Pound, of the Bacteriological Laboratory at King's College, London, who has cut and examined a great number of specimens of carious dentine, says he has always found these oval spaces in teeth with dead pulps, and recognises a dead tooth by this particular appearance. I do not know how far this observation has been corroborated by other observers.

According to Dr. Miller there is always present in carious dentine a zone of softened tissue in advance of the line of micro-organisms, separating the healthy from the infected

tissue, this zone not corresponding in outline with that of the area infected. Messrs. Underwood and Milles, however, failed to detect any softening in tissue not attacked by micro-organisms, any tissue that was penetrated in the least degree by a sharp point exhibiting these organisms under the microscope. They also inoculated nutrient gelatine with portions of the dentine taken from the extreme limits of the softened part, and found that an abundant growth of micro-organisms took place.

They therefore came to the conclusion that although, as these organisms secreted an acid capable of softening dentine, one would *à priori* expect to find a softened zone, it was very difficult to demonstrate, and if present, it existed to a microscopical extent only. In his latest work, Dr. Miller mentions as evidence of the existence of this zone, the fact that longitudinal sections of carious dentine stained with fuchsine, show large unstained portions of the tissue at the sides of the preparation. These specimens are evidently softened sufficiently to cut, although they contain no germs. The germs spread more quickly in the direction of the canals than sideways, as in this direction they can only make way through the narrow transverse branches of the tubuli, but the decalcifying acids can infiltrate the tissue in this direction with ease.

The same observer states that germs are able to penetrate into the tubuli of the normal tooth. The diameter of a tubule being larger than that of a micrococcus, there is no mechanical impediment to the penetration of germs, and with a high magnifying power a small number are sometimes seen, an advance guard, so to speak, which have penetrated into the normal tooth structure, without causing any changes in it. In absorbing milk-teeth germs are frequently seen to have penetrated into the open tubes for a short distance (Miller).

An appearance is often met with in longitudinal sections of carious teeth, the cause of which is not understood with any certainty. Short disconnected rods are seen, some lying scattered about in all directions, and others still within the tubes, lying at different angles to one another, like a pile of bricks in the act of falling. It is possible that these are casts of the tubes, especially as they disappear on the addition of dilute sulphuric acid (Miller). "They may on the other hand

be portions of the consolidated fibrils, or of the sheath of Neumann which has broken up in this manner" (Tomes).

In transverse sections the tubes are seen cut across and crowded with micro-organisms, and largely increased in diameter at the expense of the matrix. In many parts three or four tubes have run together, the matrix and parietes of the tube being destroyed.

There are some appearances in cross section which are difficult to explain. When several of these expanded canals approach one another they exhibit prismatic or angular forms, the intertubular substance having disappeared, but the limiting wall remaining intact. It is difficult to account for the disappearance of the matrix unless, as suggested by Dr. Miller, the germs form a pepsin-like diffusible element, which dissolves the intermediate substance, while Neumann's sheath is still intact.

Transverse sections also exhibit a peculiar condition, which has been described as the tobacco pipe appearance. Rounded masses of apparently homogeneous substance, which stain deeply, are seen to occupy the much expanded tubes, and in some specimens, micro-organisms in fine thread form, are seen running between and around them, leaving a clear circle of tissue uninvaded by the threads. This latter appearance is seen more frequently at the margins of the preparations where leptothrix forms are most abundant. It seems to be a kind of secondary encroachment of these thread forms on the matrix.

#### *The Micro-organisms concerned in Caries.*

According to Leber and Rottenstein the leptothrix buccalis, which is found abundantly in the mouth in the form of long thin threads and felted masses, is the principal organism concerned in dental caries.

This was disputed by later observers, although Dr. Miller, in a paper in the *Int. Practitioner*, speaks of a fungus which appeared as either micrococci, diplococci, bacteria, bacilli, or thread forms and describes all these forms as sometimes found on a single thread, which he considered to prove their genetic connection. But he nevertheless admits, that while there occur in the mouth both monomorphous and pleomorphous forms, stable forms, and forms that exhibit different

transition stages, the majority of the micro-organisms found in caries are monomorphous.

Dr. Flügge (*Micro-Organisms*, English Edition, p. 393) says :—"It is evident that the designation leptothrix cannot be employed as a generic term, for the most various kinds of bacilli may produce these thread-like formations, and the threads which occur in the buccal secretions and in the deposit on the teeth, are probably nothing more than the thread form of various well-known, or still unknown and widely distributed bacilli.

"It is possible, for example, that bacillus butyricus not uncommonly takes part in the formation of leptothrix in the mouth ; it is probable, however, that many other bacilli, more especially anærobic bacilli, do the same."

He points out that leptothrix threads do not appear to belong to one individual species, showing variations in thickness, flexibility, &c., and that those bacilli which have been isolated from the mouth by cultivation are not the forms which produce the leptothrix ; or may it not be possible that the same micro-organism which would produce threads in the mouth, might fail to do so under changed and artificial conditions ?

Recently Dr. Kreibohm (*Centralblatt f. Bacter.* vii., 1890), came to the conclusion, both from microscopical examination and from cultivation, that leptothrix merely represents a peculiar phase of growth of different shizomycetes ; he found four forms to develop leptothrix, two of which were bacilli, and two short bacteria.

Dr. Miller in his last work says, "In short, the name leptothrix buccalis, does not apply to any germ with distinctive characteristics, and the name does not deserve to be retained since it has only been the expression of a confused and erroneous view."

Of twenty-two kinds of germs from the mouth isolated by Dr. Miller in 1885, ten were in the form of cocci (showing very different dimensions), five appear as shorter, six as longer staffs. One species formed spirilla, another grew out into long threads. Of thirty species cultivated subsequently, eighteen were cocci, eleven staffs, one formed threads. In fluids, three grew to long connected or unconnected threads, one formed spirilla, eight were motile, four-

teen motionless. He could only discover spore formation in three, the others seemed to propagate themselves by transverse division.

They showed great variations in their relation to oxygen, ten only grew while there was free entrance of air, four grew better when exposed to the air, but could grow without it, eight seemed to grow well whether with or without oxygen. Eight produce colouring matter in gelatine cultures some days old, forming brick-yellow masses, such as may be seen occasionally on the buccal surface of teeth which are not kept well cleaned, the colouring matter being in the protoplasm or cell membrane, the cultivation medium not being coloured.

In the pigmentation which occurs in caries the germs remain colourless, while the tooth itself is coloured. These colours are not seen in early stages of caries, but only when it is far advanced, and usually when it is of a slow or chronic nature. Organic substances decomposed by micro-organisms assume a dark colour, and in experiments which Professor Miller has made on this point he has detected iron in these discoloured teeth.

He says, "Whether in caries of the dentine and enamel, the iron salt is formed in sufficiently large quantities, for the discolourisation to be ascribed to that source has not yet been decisively ascertained."

Of the germs especially characterized by the formation of lactic acid in the mouth Dr. Miller has separated by cultivation twelve. He finds that "a great majority of the fungi found in the human mouth are capable of producing acid from cane or grape sugar, and it is probable that with very few exceptions, all can, when the proper conditions are presented to them."

He finds also that "the same fungus may produce an acid reaction in one substratum and an alkaline in another," and says, "In such a case we undoubtedly have two distinct processes going on, first, the nutrition of the organism accompanied by the appearance of alkaline products; secondly, its fermentative action, accompanied by acid products." He further points out that "under the various conditions and with the numerous fungi present in the human mouth the reaction may occasionally be neutral or alkaline, and this would give a temporary check to the advance of the caries."



He considers that many of these fungi have a peptonizing action and that a number both possess this action, and are also capable of producing acid by fermentation of carbohydrates, and thus may be capable of producing the phenomena of caries in the mouth.

MM. Galippe and Vignal claim to have isolated six kinds of micro-organisms taken from the tubules of dentine. They thus continue:—Among these six kinds we have always met with four in every one of the eighteen we have examined. We have met with another kind eight times, and with a sixth five times. (1) The first kind constantly met with is a short, thick bacillus, not forming chains. (2) The second kind is a bacillus, which is about twice as long as it is broad. (3) The third kind is a bacillus, which is very like the preceding one in appearance, except that it has no constriction. (4) The fourth kind is a very short, very thin bacillus, nearly as broad as long; at first it would be taken for a coccus. (5) The micro-organism, which we have met with eight times, is a bacillus, which is rounded off at its ends. (6) The micro-organism, which we have met with only five times, is a rather large coccus.—*Dental Record*, Vol. IX., 1889.

The micro-organisms owe their rapid development to the secretions, deposits, &c., of the oral cavity, and not until the tissue of the tooth has undergone a certain change, first decalcification, second peptonization, can they adapt it to their nourishment. The decalcification is produced chiefly by acid, resulting from the action of the organisms upon certain carbohydrates in the human mouth, while the peptonization is produced either by the direct action of the protoplasm of the organisms upon the decalcified dentine, or by the action of a ferment which they produce. In the study and separation of the different germs in the mouth, the mass of material has been so great and the opportunities for error so varied, that it has been found impossible, with few exceptions, to classify them or decide their conditions of life. There is still an immense amount of work to be done in this direction, and this can only be accomplished by investigators who will take up the study of separate species and work out their individual life history.

Our more complete knowledge of the morbid changes in dental caries throws great light upon the predisposing and

exciting causes of the disease. Sugar being the food of these acid forming micro-organisms, all foods containing sugar, or starch, which is converted into sugar in the mouth, tend to increase the liability to decay of the teeth.

Some interesting observations of Dr. Miller's on this point show that the acids formed in the mouth by cooked starch are at least as destructive to the teeth as those formed by sugar. Saliva containing starch shows at blood temperature acid reaction in as short a time as that containing sugar, and in equal quantity. He points out that starch and starch-containing substances are more hurtful than sugar, because sugar being easily soluble soon flows away and is thus rendered harmless. Starch clings longer to the teeth and thus exercises a more enduring action than sugar. This is confirmed by the observations of Hesse on decay in bakers' teeth. Vegetables seem to be less fermentable in the raw state than when cooked, hence the cooking of food would seem to have an injurious effect in causing caries. Meat when decomposed in the mouth does not produce acid, and the observations of my Father and others, on the agency of the food in the causation of caries, show that races whose food is confined almost exclusively to meat show a very low percentage of decay. Dr. Black's researches, however, point to a different conclusion, he says (Article on "Etiology of Caries, American System of Dentistry," vol. 1, p. 730):—"Races of men who have eaten largely of acid fruits have had less decay of the teeth than those who have been debarred by their position or climate from the use of such articles of food. Generally those tribes that have subsisted largely on meat and grain have suffered more from caries than those that have had a more exclusively vegetable and fruit diet."

From the conditions of fermentation in the mouth, one would certainly expect to find more caries in vegetable and starch eaters generally than in flesh eaters, but as Dr. Black says, "Our knowledge is too meagre to warrant any lengthy discussion on this point."

An irritated condition of the gum giving rise to an acid secretion is supposed by several writers to be a cause of caries, but this is disputed by Dr. Miller, who points out that in *pyorrhœa alveolaris*, where an irritated condition of the gum exists for months, caries seldom occurs, and where decay

does occur in cases where there is considerable congestion and separation of the gum at the neck of the tooth, it may be explained by the lodgment of food.

Among the predisposing causes of caries, defective structure holds the first place; deep fissures and cavities in the enamel, imperfections in the dentine, especially interglobular spaces (increasing the porosity of the tissue) irregular position of teeth leading to the retention of food, are other predisposing causes. Many diseases which give rise to an acid reaction in the mouth must be included among these, especially also diseases giving rise to dryness, *e.g.*, typhoid.

A predisposition to decay of the teeth is said to be inherited. Dr. Miller considers that this is only possible in so far as the inheritance of ill-developed and irregularly placed teeth is possible.

The surgical treatment of dental caries by the thorough removal of the diseased tissue, the treatment of the cavity with an antiseptic, and the insertion of a material which by its density and applicability to the walls of the cavity shall thoroughly exclude the germs, is, so far as our present knowledge goes, the most complete cure for the disease.

We can scarcely maintain, however, that with the most careful manipulation every germ is removed, but any that are left under a tight fitting plug are cut off from their food supply and their further growth prevented, seeing that they are probably incapable of attacking dentine in the absence of carbohydrate.

The incorporation of antiseptic materials in fillings has lately received some attention and perhaps more may yet be done in this direction. Whatever the care taken by the operator we must all now and then meet with those most unsatisfactory cases where in spite of the most careful treatment decay rapidly progresses and filling seems to be only a partially successful mode of treatment. In such cases there is no doubt usually an undue porosity of the tissues of the tooth.

As to means of prevention, germicides which can be used in the mouth of such a strength that they are not injurious to the system have no very great penetrating power. The fermentative action of the micro-organisms at the bottom of cavities and fissures in the tooth is not interfered with by any

mouth wash. In the mouth the difficulty of applying any thorough antiseptic treatment is very great, we may seal up a disinfectant in a pulp cavity very effectually, but it is impossible to obtain any prolonged and complete disinfection in the cavity of the mouth, such as is necessary for the prevention of caries. Thorough cleansing of the teeth is the most effectual means of preventing decay, and the experiment of Dr. Miller's above referred to, shows that by the use of antiseptic mouth washes, combined with thorough cleansing with tooth brush and silk, the amount of acid produced in the mouth may be very greatly reduced.

The great science of bacteriology which has revolutionised medicine in the last few years, and which even now is hardly past its infancy, has added a new interest to our specialty. It has given us a much clearer understanding of the true pathology of disease, but in our own department, valuable and important as have been the contributions to our knowledge, it can scarcely be maintained that our understanding of the rôle of the microbe in dental diseases is yet complete, much must remain to be discovered where much is still obscure.

Adequate investigation in a special subject like this can only be carried out by those who have qualified themselves for the task by a sound practical training in the general sciences of bacteriology and chemistry; while in the wider subject of general pathology we see a small army of original investigators, in the limited area of dental pathology there are but few who by their researches can claim to rank as bacteriologists.

It is within the power of the younger members of the profession so to qualify themselves that they shall be able to contribute their share to the accumulation of well digested facts by carefully conducted experiment and deduction.

In the words of Professor Huxley:—"The known is finite, the unknown infinite; intellectually we stand on an islet in the midst of an illimitable ocean of inexplicability. Our business in every generation is to reclaim a little more land, to add something to the extent and the solidity of our possessions."

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### A Method of adding Gum to Ordinary Artificial Teeth, rendering it more generally available.\*

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L.D.S., R.C.S.Eng

I THINK it will be admitted by almost every dentist that a well made and properly adapted artificial denture of enamelled platinum, or what is commonly known as continuous gum, is the nearest approach to a perfect substitute for the natural teeth. Yet this almost ideal achievement of the mechanical laboratory with which the name of John Allen will ever be associated, is, despite improvements both in materials and appliances, possibly even further from being a part of the every day practice of the ordinary dental laboratory than it was on its introduction some forty years ago. The subsequent introduction of vulcanite, mainly because of its manipulative facilities and in spite of its inartistic deficiencies, was a death blow to the general adoption of the more artistic process. The stereotyped sectional gum block of the American and the improved pink rubbers of the European manufacturers may be taken as efforts to meet the as yet unsatisfied artistic instinct of the dental mechanic. This strange and somewhat anomalous state of affairs makes it worth while to consider in some detail the advantages and alleged disadvantages of continuous gum work, since, without some effectual simplification of the process, it is evident that it will never become part of the every day practice of the dental laboratory.

Let us consider what are claimed as the advantages of this method.

Firstly. *Theoretically*, continuous gum work possesses capabilities of adaptation of the size, the shape, the colour, the position, and the pitch of the teeth employed far superior to any other known kind of artificial denture, except perhaps that excellent and nowadays almost old-fashioned method known as English tube work. *Practically*, it does nothing of the kind, but that mainly from the fact that a proper selection as to shape, size, and colour of

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\* Read at the Annual General Meeting of the Association, held at Exeter, August, 1890. The author's original intention was only to give a practical demonstration of the method, but it was afterwards for various considerations deemed better to preface that with an explanatory paper, substantially the same as presented at the Section of Odontology of the International Medical Congress, Berlin, 1890.

the special teeth requisite for the process is not to be found in the average well-equipped dental laboratory, nor for the matter of that even in the most important dépôts, at any rate on this side of the Atlantic. This difficulty applies with almost equal force in these days to tube teeth, and is evidently entirely due to the correlation of the indisputable law of supply and demand. Probably this fact has contributed more than any other to the slow adoption of the process. The more general employment of the method therefore is to be looked for rather in the direction of adapting or of obtaining a body and an enamel applicable to the ordinary kinds of teeth, of which a fair if not adequate selection is to be found in the laboratory of most dentists, and certainly in most dental dépôts.

Secondly. The material of which the continuous gum is composed, possesses as great capabilities for the restoration of the features to their normal expression as either vulcanite or celluloid, while it far surpasses either of them as a material for producing an artistic imitation of the natural gums.

Thirdly. The combination of platinum and fine porcelain constitutes a denture which for cleanliness is unapproached by any other.

Fourthly. As to strength, adaptability, and its power of conducting heat and electricity, the platinum plate which is the base of these dentures, possesses all the qualities of gold plate. It must be admitted that the colour of the metallic plate neither pleases the eye of the average dentist nor that of the average patient as does the so-called nobler metal. Sentimental though this grievance may be, the colour of platinum is no less a real disadvantage, and paradoxical though the statement may seem, the recent rise in value of platinum by almost phenomenal leaps and bounds may not be an unmixed disadvantage, since in a few years it will probably be the nobler metal of the two when this senseless objection to its colour will probably have disappeared.

Fifthly. With regard to its durability it cannot be worn out, though it must be admitted that its preservation requires more careful treatment than ordinary dentures, the most frequent injuries being those which occur out of the mouth.

Sixthly. With regard to its capabilities of repair, it certainly is not as easily repaired, as for instance, an ordinary vulcanite denture, still the process of repair is not really difficult. There is, however, this additional advantage in favour of continuous gum work, that on proper completion of the repair the case is again equal to new.

On the side of its disadvantages, real or alleged, we will discuss the following points :—

Firstly. With regard to weight, bulk for bulk continuous gum is considerably heavier than any other form of denture. The mere weight of an upper denture is within reasonable limits a quantity which may be ignored, provided the plate is thoroughly well adapted to the mouth. Having worn at various times dentures of all kinds and combinations except aluminum and celluloid, I can confidently aver that I never was conscious at any time of any difference in the weight of the different appliances when in the mouth. The actual weights of four upper cases I have worn at different times with an equal absence of any subjective sense of weight are vulcanite  $\frac{2}{3}$ , gold plate with gum blocks rubber attachments  $\frac{3}{4}$ , continuous gum (porcelain)  $1\frac{1}{2}$ , ditto [glass], 1 oz. [avoirdupois] or 8 : 9 : 16 : 12 :—Statistics of a few cases show that the weight of a full upper case in vulcanite is from  $\frac{3}{4}$  to 1 oz. and in continuous gum from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  oz. The new enamel is somewhat lighter. One of my patients, a public orator, has worn with comfort and ease for five years full upper and lower dentures of vulcanite each weighing  $1\frac{3}{4}$  oz., in consequence of the mass of vulcanite necessary to restore the sunken features. I know an expert who wears a somewhat similar upper case with large plumpers all in continuous gum and the weight being about  $\frac{1}{2}$  lb. These facts may serve to rectify the conclusions of some sceptical dentists who only criticise a case from its weight in the hand.

Secondly. With regard to that unpleasant clinking sound as the teeth are brought into occlusion, that is indeed a real objection, which, however, is only slightly, if at all, more apparent than in all dentures where mineral teeth are used.

Thirdly. With regard to the difficulty of construction, it is usually maintained that it requires greater skill and a higher order of talent than ordinary mechanical work. I firmly believe, both from my own experience and that of my students, that it presents few, if any, great difficulties to a really efficient dental mechanic ; while to the dentist who is not only a mechanic, but, as he ought to be, an artist, it only enables him to achieve greater artistic effects, by the increased facilities afforded by the superior capabilities of the materials employed in this process. One of the real difficulties in the ordinary form of continuous gum work is, of course, the uncertainty of results, and the labour involved in the prolonged furnace work—a difficulty, however, which is very

the special teeth requisite for the process is not an employer of the average well-equipped dental laboratory, nor agreeable incidents as even in the most important depôts, at an enamel colours, and so on. Atlantic. This difficulty applies with ordinary by specialists, practical days to tube teeth, and is evidently showing that excellent continuous of the indisputable law of supply of gas and air furnace, such as has contributed more than a process. The more general experience of Fletcher's improved is to be looked for rather which is capable of being worked either by ing a body and an with an oxy-hydrogen blast, but an examination-teeth, of which a favourable expression as to its efficiency, laboratory of mo

Secondly. The ordinary coke furnace. A good volume posed, possessing the ordinary continuous gum-work, which arises from the features to while it an art of perfectly vitrifying both the body and the enamel.

The fact, too, that this point of vitrification of the materials employed is usually so near that of the teeth themselves that there is a danger of the latter turning out roughened and otherwise unsatisfactory. Here, again, it is evident that any important reduction of the time and labour involved in the process of firing, by a tangible reduction of the vitrification point of the materials employed, will be a distinct advantage.

Fourthly. It is usually stated that continuous gum work is not adapted for partial sets, and, while it must be admitted that this is true to a very great extent, I think that the favourable experience I have had of a few such cases, justifies me in saying that this general conclusion is probably due to the inherent difficulties of the ordinary methods, and, with the simpler and easier method about to be described, it has had its applicability to partial sets very greatly extended. It must be admitted, too, that to add a tooth to the ordinary vulcanite or gold denture, is easy of accomplishment, but it would be rare to find such an addition easy in the case of continuous gum.

Fifthly. It is held, even by many experts in continuous gum work, that it is not so applicable to the requirements of a lower as to that of an upper denture. That opinion seems to be based upon two grounds: firstly, that the weight produces "irritation at points along the edges of the plate, and frequently induces a renewal of the process of absorption along the whole alveolar ridge;" and, secondly, "from the shape of lower plates, they are more liable to accidents when out of the mouth, and they are



easily broken even by use in the mouth than upper  
own experience in such cases is too limited to warrant  
the authority of the article on this subject in the  
tem of Dental Surgery," but, so far as it goes, I  
neither of these disadvantages.

more serious objection is the fact that this method  
the opportunity for making those changes which are  
y so necessary for the comfort of the patient during the first  
few days of wearing an artificial plate without marring the appear-  
ance of the denture. This objection of course applies in much  
greater force to lower than to upper dentures. There is, however,  
one method by which this can be controlled to a very considerable  
extent, and that is, by getting the patient to wear the denture or  
dentures for a day or even two, before the plate receives its final  
coat of enamel. Dr. Smith, the author of the previous quotation,  
suggests that where it is desirable to construct a continuous gum  
denture for the lower jaw, it will be found much better to make  
the adaptation of the plate with vulcanite. A remark, however,  
which is made later on in the same work, after describing how this  
may be accomplished, is not without considerable significance,  
"In regard to these combinations of continuous gum and rubber  
it may be remarked that as the porcelain gum is usually cracked  
in places, either after the final firing or after the vulcanization of  
the rubber plate, and as repair is difficult and expensive, they  
cannot be recommended as well adapted for general use."

At the annual meeting of the British Dental Association in  
1887, Mr. Cumming read a paper with the title which fitly des-  
cribes the subject of my present demonstration, viz., "Continuous  
Gum Work with any Form of Make of Tooth." The novelty of  
Mr. Cumming's method consisted in his baking the ordinary  
artificial gum on platinum base apart from the teeth, which might  
be of the ordinary variety, and were finally mounted on a metal  
or rubber plate by the usual process of vulcanizing. The whole  
process seemed to me so complicated that it presented little, if  
any, advantage over the ordinary method of continuous gum work.  
I am quite prepared to admit that this conclusion may have been  
an erroneous one, but do not think that even the inventor will  
deny that his claim that it should be the coming process of con-  
tinuous gum facing has not been realized. The numerous favourable  
comments, however, on the specimens then shown, warrant me in  
believing that you will regard the process I am about to describe

to you with even greater interest, since it achieves all the objects of the Cumming method in a very simple way.

A reference to the formulæ for continuous gum work in that very interesting chapter on moulding and carving porcelain teeth in the American system of Dental Surgery, Vol. II., shows that they consist of ingredients of very different degrees of fusibility, and it seems to me that such ingredients as cryolite, Bohemian glass, flint glass, and "white glass," [whatever that may mean] are added for the purpose of reducing the fusibility or acting as a cement to the more refractory ingredients, such as silica or quartz, kaolin and spar. I therefore set to work and instituted a series of experiments which may be briefly described as the very opposite, that is, adding the more refractory substances, which for convenience of discussion may be termed "tooth frit," for the purpose of giving stamina and cohesion to glass as a basis. Having satisfied myself as to the possibility of making an artistic and natural reproduction of gum colour with mixtures of ordinary coloured glass and vitreous enamels of various kinds, and also the possibility of controlling the fluidity, if I may be allowed the expression, of the molten glass, I found from a consultation of technical literature on the subject, which is wofully unsatisfactory from a purely scientific point of view, that as we would anticipate, there is a very considerable difference as to the fusibility and the solubility of the various kinds of glass. After various and prolonged experiments which it would be tedious to detail, suffice it to say that I succeeded in turning out in this way an artificial denture of enamelled platinum which enabled me to approach one of the highest technical authorities, namely, Mr. Harry Powell, of the celebrated White Friars Glass Works, London, with a view to interesting him in my experiments. I candidly told him how provokingly unsatisfactory the technical literature had proved, and asked him to supply me with materials of known ingredients to replace the somewhat haphazard materials with which I had been working. In this way I was enabled to make very considerable progress, and after having satisfied him as to the utility of the process and the prospect that it might be of considerable usefulness, he very kindly placed his practical knowledge and technical skill at my disposal. By utilising a formula for that Mosaic work for which this ancient house is famous, we have succeeded in producing a body and enamel capable of fusing at a relatively low temperature. With regard to the artistic results

achieved, the specimens which I now exhibit speak for themselves, even though the experiments are not yet complete. I think you will admit that, just as we match teeth, it will be almost as easy to match the natural gum which in different mouths presents an extraordinary variety of shades and appearances, from the pale anæmic gum to that purplish turgidity not unfrequently found to be chronic in many mouths.

After having referred to the extreme fusibility of this new enamel, you will doubtless be surprised that the specimens presented to you are mounted on a highly infusible metallic base. The new materials may be fused on copper, dental alloy and gold, but it was early discovered that there was so far only one material, namely, platinum, which was available, and that for two reasons. Firstly, during heating, chemical change takes place between one or more ingredients of the enamel and the metallic base, such as, 18-carat gold, which has hitherto prevented my obtaining the natural gum colours on any other dental metallic base but platinum and pure gold. This change might possibly be obviated by using a glass which did not contain silicate of lead, but as there are other qualities to be considered, such as durability, strength, and solubility it is considered that we obtain a stronger material, insoluble, or at any rate practically insoluble, in the mouth by keeping to the use of flint glass as the main ingredient.

Recent experiments on the behaviour of this vitreous enamel on various metallic bases afford a reasonable clue as to the cause of the change of colour in the vitreous enamel. Some of my specimens which will be presently exhibited prove :—

1st. That on pure gold there is no discolouration.

2nd. That on silver there is a yellow discolouration.

3rd. That on copper there is a black or greenish discolouration.

These facts seem to indicate, first, an oxidising of the metal under the influence of heat, and secondly, the metallic oxide, thus formed, imparting its colour to the vitreous enamel, either directly or by causing some further chemical change in the constituents of the vitreous enamel. A similar discolouration takes place with the alloys, and therefore, in 18-carat gold, we obtain so much discolouration, both from the copper and the silver it contains, as to preclude its use in this method. So readily is the vitreous enamel discoloured, that even on the pure gold specimen, the one or two tiny points where coin gold was used as a solder, or to close a small fissure in the plate, were distinctly marked by a deep green local discolouration on baking the body.

Secondly, the coefficient of expansion of platinum and glass being the same, platinum must possess practically obvious advantages, especially as to adhesion, over any other material. If it is desired to give the denture the more acceptable appearance of gold, it is easy of accomplishment as for instance by electro gilding. Another method, which is not uninteresting is well represented by this specimen. The metal base is made by sweating a piece of pure gold and pure platinum together and rolling them out in the mills to the desired guage, the enamel is infused upon the platinum surface leaving an exposed surface of pure gold. Mr. Powell was extremely surprised to see the adhesion of the vitreous enamel on pure gold; although the attachment is not so strong as in the case of platinum, it is evident that by stippling we can get sufficient attachment for our purpose, though this statement may have to be revised later on, as no practical case on gold has yet been worn in the mouth for any length of time. On dental alloy, as one of the specimens shows, the enamel simply flakes off as the specimens cool from the unequal contraction of the dental and the enamel. It is still necessary by this method to use pure gold for the soldering of the teeth to the platinum base, but soldering, however, is not absolutely necessary as demonstrated by this full set of continuous gum. Here the teeth were mounted as usual in wax on the metal plate, the case was then set teeth downwards on a base of plaster, sand and fire clay, equal parts, the investment being carried over so as to embrace the tips of the teeth, and thus to hold them in position. The wax was then removed in the usual way, and the body built up around the teeth, the purple colour which shows behind the front teeth in this specimen is due to a chemical action between the investment and the body, and indicates a danger, which, however, can usually be avoided. Although the enamel seems to adhere with tolerable firmness to the smooth platinum plate, it is better to increase its attachment by either stippling the plate or forming a boundary for the material by means either of a turned up edge to the plate, or what I think is better, soldering a rim of triangular wire of platinum with pure gold; all of which processes are exemplified in this specimen case [full upper]. In this same case you will see that the enamel is equally applicable to English and American teeth, the front teeth being American and the bicuspid and molars "Ash's diatonic."

For full, but especially for partial dentures, both upper and

lower, this new enamel seems to afford a great and important sphere of usefulness for the excellent English tube work. One reason why this work is so little employed is no doubt due to the fact that too frequently the dental mechanic of to-day is lacking either in the ability or in the patience requisite in nicely and accurately adjusting the tube teeth to the plate. This fine fitting of tube teeth, which occupies, even in the hands of an expert, the greater part of the time of manufacture, is entirely obviated by the new method of working it. The plate is struck up in platinum, and, instead of gold, platinum pins are mounted in the usual way, only soldered with pure gold. No fine fitting of the teeth to the plate is necessary, as the body does that more effectually than the most expert manipulator of the corundum wheel. The use of sulphur cement and the working loose of the teeth is also obviated, since they are held firmly in position by the body and the enamel. The general excellence of ordinary tube work is further improved by the filling up of all spaces where food might lodge, while without impairing in any way the utility and strength of the older method, the artistic colouring of the restored gum is, I think, a great advance on the often unsightly long-rooted tube teeth.

I can confidently recommend, from an experience of quite a number of practical cases in the mouth, this method as being peculiarly applicable to tube teeth mounted on a platinum base, and also feel very certain that if the method were at all generally adopted it would be followed by the introduction of a new and improved form of tube teeth, which practitioners in this country would at once recognise as being fitly described by the term, diatoric tube teeth. These would have the improved form of the American counter sunk teeth and the solidity of the English tooth-body without the unnecessary platinum tube. For our purpose such teeth would be immensely superior to the flat ordinary teeth, if only from their having that rotundity of outline which is characteristic of the natural teeth. I have only made a few experiments with regard to the possibility of baking the body on a metal plate in a mould or flask such as we use for vulcanite. To efficiently carry out these experiments would require considerable alteration in the muffle and oven, and, therefore, though I have not yet been enabled to attain success, I have reason to hope that it may yet be done.

As it is as well to show one's failures as well as one's successes,

you will see from this specimen that I have so far failed in mounting a full continuous gum without cracks on a vulcanite base, but I will not admit that I should yet accept that failure as insurmountable.

For small blocks of a few teeth, I think it is evident from these specimens that the new method is of considerable utility and of artistic value in special cases. For small cases of bridge work, removable or fixed, this enamel seems to have a great field of usefulness.

With regard to the process of firing, I have had great difficulties, as no existing form of furnace was found exactly applicable to the dimensions of the ordinary denture. If, however, the profession adopt this method of continuous gum work, such difficulties will be easily overcome, as by constructing and adapting a platinum muffle to the ordinary small Fletcher's muffle furnace, I have been enabled to turn out the specimens which have been exhibited to you. The furnace is simply an ordinary draught gas and air furnace, and the whole process of firing can be accomplished in about a quarter of an hour, though it is sometimes advisable to take a little longer time.

As most of you know, annealing is not an unimportant matter in the treatment of glass, even one to two weeks being deemed necessary in some important commercial products. This, however, is most essential where these products have to combine strength with thinness. Without trying any prolonged annealing process, we have so far found very little difference in the appearance of crack in cases which have been slowly or quickly annealed. If the piece is allowed to be cooled down in the oven, it may be a distinct advantage to allow it to do so slowly. In that case, it is well to close the chimney, as that retards the process of cooling very materially, by preventing a draught of cold air through the furnace. A lower case I am wearing now, was simply allowed to cool down in the oven. The blocks of four teeth were slightly annealed by being allowed to cool down in cotton wool, and other cases by cooling down in the oven.

An effort has been made to more thoroughly anneal the upper case mounted on pure gold. After the case was sufficiently fired, the gas was turned down, so that it was retained for several hours at a temperature somewhat less than the firing heat, and then gradually allowed to cool down in the oven during the night. A more thorough annealing might be achieved by placing the case,

after it had cooled sufficiently, in hot sand, hot plaster, or some hot fatty body, such as oil or stearine. Further experiments in this direction will be carried out. Meanwhile it is interesting to know that Mr. Powell is surprised that, considering all the circumstances of the case, cracks are not more numerous.

Glass, as we know it, is usually fashioned into objects of extremely slender proportions, and so firmly imbued is the human mind with the proverbial fragility of glass that it is not uncommon to find amongst the insane, that the afflicted individual imagines he is made of glass, and therefore he must not be touched for fear of his breaking. Glass, however, is a material of very considerable strength, but much depends on the shape and form which it takes. A material, therefore, which is utilized in the arts, for roofing houses and paving streets, must surely have sufficient strength to be judiciously applied to the requirements of the dental art. Some dentists and experts have predicted that this material will not last in the mouth. The almost universal receptacle for fluids of all kinds, whether acids or alkalies, is a bottle made of flint or other glass. To all practical intents and purposes, this new continuous gum is flint glass, and therefore, I think that the acknowledged fractional solubility of flint glass in weak alkaline solutions will not prove a serious drawback to the employment of the process.

The facility with which the enamel may be renewed and repaired is evidenced by the smaller specimens exhibited. With regard to the production of different colours a very considerable modification of each colour from a darker to a lighter shade may be obtained by means of rubbing down with a muller on ground glass, or the gum given a mottled appearance in other ways. As this, however, would lead me into details of manipulation, which would be tedious in a paper, I shall reserve these and other points for the demonstration of the process which I shall have the honour of making.

In conclusion, it is important to note that I do not suggest this new material as superior to continuous gum work as used at present by experts, but I do claim from a short, though I think sufficient practical experience in my own practice, that it is capable of replacing with advantage to the patient and with facility to the dentist, and that to a large extent even in partial dentures, some of the less artistic ordinary products of the dental laboratory.

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## LEGAL INTELLIGENCE.

## Stafford County Court.

MISFITTING FALSE TEETH.—W. H. RIDGE, surgeon-dentist, Eastgate Street, Stafford, *v.* C. J. NEVITT, accountant, Stafford.—This was a case in which the plaintiff claimed the value of a set of false teeth supplied by him to the defendant. His Honour at a former Court had suggested that the matter should be referred to an arbitrator, and this was agreed to. His Honour now intimated that he had received the arbitrator's report, which stated that the teeth were a misfit. His Honour therefore gave a verdict for the defendant with costs, and in doing so said there was no reflection upon the plaintiff professionally, as the most skilful men made mistakes.—*Midland Evening News.*

## COLONIAL INTELLIGENCE.

## The Dental Association of Victoria.

THE first annual meeting of the members of the Dental Association of Victoria was held on Thursday at Parer's Café, Bourke Street. There was a fairly large attendance, and Dr. Springthorpe presided. Apologies for non-attendance were received from Mr. Alfred Deakin, Dr. Brownless, Mr. Coppin and others.

The SECRETARY read the first annual report of the Association, which contained statements to the following effect :—

The Association was duly registered and incorporated on the 4th December. The question of the establishment and management of a dental hospital engaged early and considerable attention. After long and careful deliberation a series of rules for the maintenance and government of such a hospital were drawn up, and the Council had been pleased to find that these rules have been adopted without alteration at a general meeting of subscribers to the hospital. In accordance with these rules a committee of management had been elected. The Council was indebted to Mr. Blitz for the gift of the valuable building where the hospital was situated. The privileges of members of the Association and of the profession generally had not been neglected. The Council has decided that dentists using letters or additions to their names,



implying the possession of a diploma, where no such diploma exists, or using letters or additions to their names denoting the possession of recognised diplomas and not actually possessing such diplomas, shall not be eligible for election as members of the Association. The attention of the Deputy Sheriff has been drawn to the fact that registered dentists were usually exempted by law from serving on juries, and a list of registered dentists was left with this officer in order to secure their omission from future jury lists. By representation to the Customs department the Council has secured the admission free of duty of certain dental materials on which a duty had previously been levied. The committee had much pleasure in stating that, in pursuance of its rules, the following gentlemen have been elected the first honorary members of the Association :—The President of the British Dental Association, the President of the New Zealand Dental Association, the President of the Dental Board of Victoria. Forty-eight dentists have been enrolled as members during the year, and two associates.

The PRESIDENT (Dr. Springthorpe) then delivered the following address :—

GENTLEMEN,—Following a time-honoured custom, your Council have decided that your President for the time being should not be permitted to withdraw from the honours of office without signalling his retirement by some sort of valedictory address, and it is in obedience to that decision that I enjoy the privilege of now addressing you.

The dentists of Victoria occupy to-day a position of which they may well feel proud. Their professional privileges are conserved to them by Act of Parliament ; their internal ethics and professional interests are in the hands of an active, and, I believe, discriminating Association, and a satisfactory curriculum has been established, which will necessitate skill and efficiency in those who shall join you as the practitioners of the future. In looking round, therefore, for a subject to bring before you this evening, none presented itself to my mind so suitable as the narration of how all this has come about, with its incidental summary of your present position, and some of its suggestions upon your future outlook.

Dentistry, as a profession, may be said to have been inaugurated officially by the Dentists Act, 1887. Previous to this enactment it had always been possible for the owner of a brass plate, and—

in the absence of professional knowledge—an equally brazen assurance, to practise the dental art without let or hindrance. Anyone indeed might style himself a dentist, and continue to practise as such so long as he could gain sufficient support from the uninformed public. As a necessary result the Victorian dentist had no professional status, and the Victorian public lay at the mercy of impudent impostors. But by the Dentists Act all this was changed, and the door was finally closed against such practice by unregistered, and therefore unqualified, practitioners. And in this connection it is only right to state that many thanks are due to the Odontological Society of Victoria for its continued endeavours to obtain this necessary legislative safeguard. But, like all similar acts dealing with a state of affairs already operative, the Dentists Act had to conserve existing rights, and its provisions had to partake of the nature of a compromise. Its first aim necessarily was to define what persons should be deemed qualified to practise dentistry in Victoria. Naturally, no difficulty existed with reference to those who were registered or entitled to be registered in the United Kingdom in accordance with the Imperial Act, or who held recognised certificates, British or foreign. But such were the very small minority amongst the large number who were and for some time had been actually engaged in different parts of Victoria in the practice of dentistry that the great practical question was how to deal with this large majority. This difficulty was met by the Dentists Act in the same manner as the similar difficulty was met in the case of chemists and medical practitioners when the Pharmaceutical and Medical Practitioners Statutes were first enacted. It was decided that “any person who is at the passing of this Act *bonâ fide* engaged in any part of Victoria in the practice of dentistry or dental surgery, either separately or in conjunction with the practice of medicine, surgery or pharmacy, shall be entitled to be registered under this Act.” And in dealing with the matter it may be fairly claimed that the method was justifiable by equity no less than by precedent. For we find express provision made for due inquiry by the dental authorities, and severe penalties imposed in cases of wilful falsification. There were still left, however, those who had commenced their pupillage or apprenticeship prior to the passing of the Act. Such dental students were fairly provided for by admission to registration on making the necessary declarations.

Having thus satisfactorily dealt with the past, the Act turned to

the future, and in the case of all others desirous of obtaining a certificate of fitness to practise it enacted that "any person who has attained the age of twenty-one years, and has been engaged continuously during a period of not less than four years in the acquirement of professional knowledge, and has passed an examination before the Dental Board in the subjects prescribed by them, subject to the approval of the Governor in Council, shall be entitled to be registered under the Dentists Act." Since then the further step has been taken of sanctioning an educational curriculum which, as we shall presently see, compares favourably in respect to its requirements with the best existing licensing bodies. Thus it is certain that the future dental practitioners of the colony will be men well trained in the practice of their profession, and there can be little doubt that the Victorian dental school of the near future will, like the medical and pharmaceutical schools of the present, be a professional college of which the community need not feel ashamed. But the benefits which the Act conferred upon the dental body do not end here. By it registered persons are entitled to practise, can sue for fees, hold hospital and other appointments, and are exempt from serving on juries, inquests or in the militia. Unregistered persons, on the contrary, are entitled to none of these privileges, and become liable to a penalty not exceeding £20 if convicted of taking or using the name or title of dentist, dental practitioner, dental surgeon, or the like. Further, the Dental Board, to whom is entrusted the task of working the Act, is to be both representative and self-supporting. Such is a brief summary of the Dentists Act, 1887, and it will suffice to prove that by its means the dental profession of Victoria has been placed upon a thoroughly sound basis, and its future progress assured along lines honourable to itself and satisfactory to the public.

But some account of the *personnel* and operations of the executive thus created—the dental board of Victoria—deserves to be placed upon record. The first board, in the absence of a recognised profession, had to be a nominee board, and consisted in accordance with the Act, of four dentists, three medical men, and one other, a representative chemist. The names of the first members were Mr. T. M. Girdlestone, president; Mr. J. P. Ryan, Dr. T. Rowan, and Messrs. G. Thomson, L. A. Carter, F. A. Kernot, T. Muridge, and J. Ross. Their first meeting was held on the 4th of February, 1888. The first step taken was the ap-

pointment of Mr. E. Joske as registrar, an appointment which has been followed by most satisfactory results. Scarcely, however, had the new board entered upon its labours when a serious difference of opinion arose as to the interpretation of the clause under which most applicants sought for registration. Counsel's opinion was asked, and given to the effect that under the Act the board could not refuse to register those who had produced the necessary evidence that they had practised the drawing of teeth without having been engaged in other dental practice. The medical members of the board thereupon declined to be parties to the registration of such persons as dentists, and tendered their resignations. The dental representatives, however, decided for their part to continue to administer the Act as thus defined, provided suitable medical men could be got to replace those who had resigned. It was at this juncture that Mr. Deakin asked me to take a seat upon the board. It was a somewhat invidious position in which to place oneself, after the retirement of three men so respected as the late members of the board, but there seemed to me to be some cogent reasons for my compliance. Thus the dental representatives were disinclined to abandon their posts. The qualification clause, as interpreted by counsel, seemed to me equitable on the whole, and it certainly was in accord with precedent. Further, I had Mr. Deakin's assurance that the Act would not be amended in the direction desired by the resigning members, but that the wrecking of the Act would mean its present loss, and the certainty that any future Act would have to deal with a vastly greater number of applicants, who would have only the same qualification for registration. Accordingly I undertook to accept a seat upon the board. Soon afterwards Dr. Turner, Dr. Hudson, and myself were gazetted as members of the board, with Dr. Turner as the new president. About the same time Mr. H. W. Potts was nominated to fill the vacancy caused by the death of Mr. Ross, and later still Mr. Iliffe has been gazetted in place of Mr. Muridge, resigned. Looking back now, after some two years of work with the board, I venture to claim that subsequent events have justified our action, and that it was a good thing for the dentists of Victoria that the Act of 1887 was accepted by the profession.

But something should be said of the work of the board during all this time. The registration of some five hundred dentists, with all the inquiry, correspondence, evidence and discussion neces-

sarily involved therein, was a task neither small nor unimportant. The framing of by-laws to regulate the conduct of business, approved by the Governor in Council on 5th February, 1889, and for the conduct of examinations, and election of future boards, similarly approved on 14th January, 1890, took both time and consideration. But the main work of the board, upon which it lavished most of its attention, was the elaboration of the educational curriculum necessary for the training of all future dental students. Undeterred by a semi-official reminder that it was *ultra vires* for the board to actually make regulations dealing specifically with this all-important matter, it proceeded with its investigation, and in the end had the great satisfaction of seeing its recommendations approved of by the Governor in Council without so much as the verbal alteration of a single clause.

For the general benefit, I may be permitted to mention the main requirements thus legally enjoined upon all future dental students. During four years all students must have been "engaged continuously in the acquirement of professional knowledge." They must commence by passing our matriculation examination (or its equivalent) with the same compulsory subjects as are demanded for our medical students, with the single but significant exception of Greek. They must have been indentured pupils of registered dentists for not less than three years, and have attended the practice of a dental hospital for not less than two years. Like our pharmacy students, they must have attended courses of lectures on chemistry and *materia medica*; and like our medical students, additional courses of lectures on anatomy and physiology, with one course of dissections, two years' general hospital practice with clinical lectures, and special courses of lectures on medicine and surgery, on dental anatomy and physiology, dental surgery and pathology, and dental mechanics and metallurgy, to be delivered by lecturers appointed by the Dental Board. Such is the educational scheme which the Dental Board succeeded in inducing the Government to sanction. It is thorough and comprehensive, drawn on the lines of the best English and American models, and practically assures the future standard of the profession. In my opinion it was no small achievement for the board to bring this weighty matter to so satisfactory a conclusion.

Existing rights, however, were not forgotten. A modified examination was drawn up and approved for apprentices previously indentured and persons who had applied for registration

within eighteen months after the coming into force of the Act. One such examination was held on 13th June, 1889, when two out of three candidates passed. Further, those who had commenced their studies before the gazettal of the curriculum were exempted from the matriculation, whilst registered dentists who had practised dentistry for five years before the passing of the Act were made admissable to the examination for the certificate of competency *sine curriculo*.

Nor have the relations of the board to other licensing bodies been overlooked. The attention of the board has been directed to the consideration of the question what colleges and educational establishments are to be recognised as qualifying for registration here. Upon this point, however, it has as yet come to no decision, pending the receipt of reliable and exhaustive information. But here must end our reference to the board and its work.

Passing onward in our survey, we next fall in with the Dental Association, whose first annual meeting we celebrate this evening. The Dental Board, in response to a query from the Odontological Society, had decided that the establishment of a Dental Hospital was scarcely within its functions. As, however, such a hospital had now become a legal necessity as well as a public desideratum, a number of leading dentists interested themselves in the matter, and a general meeting of the profession was held on 7th August, 1889. You are all aware how at that meeting Mr. Potts made the happy suggestion that it would be better, if possible, to form a Dental Association, with the establishment of a Dental Hospital as one of its first objects, than to restrict the attention of the profession to the single question of building a hospital. You remember also how the committee appointed to consider the matter surmounted the crucial difficulty as to the qualifications to be required from members of such association, by accepting the requirements of the British Dental Association (registration, good character, non-use of show cases or public advertisements), with the locally necessary proviso that advertising name, address and hours of consultation was to be deemed unobjectionable. Thus arose the Dental Association of Victoria, a body which, I make no doubt, is to exercise a potent influence upon the future of colonial dentistry.

You have already listened to the record of its first year's work, so that there is no need to do more than touch upon some of the more important points. On 1st October, 1889, the

Association was formally inaugurated, and its first Council, whose names are mentioned in our annual report, was elected by ballot. Articles of Association were forthwith drawn up, and agreed to on 31st October, 1889. On 4th December, 1889, the Association was registered under the Companies Statute, and notification of its incorporation appeared in the *Government Gazette* of 6th December, 1889.

Having thus established itself upon a firm legal basis the council of the association proceeded to fulfil its first function by entering upon the discussion of the ways and means of establishing a dental hospital. A committee was appointed to report upon the matter, consisting of Messrs. Carter, Clarke, Iliffe, Potts, Thomson and myself. After long and anxious consideration, a series of rules for the establishment and government of the proposed hospital were agreed upon by the committee, and after further discussion, adopted by the council. The same old questions which have always to be settled in dealing with hospitals had to be faced upon the present occasion. The crucial questions, of course, were: Who was to manage the institution—the subscribers or the association? Who was to elect the honorary staff—the Dental Board, the Dental Association, the subscribers, or the committee of management? What was to be the number of the honorary staff and what their qualifications? What were to be the privileges of the subscribers; and what were to be the requirements of patients?

These questions the council proposed to answer as follows:—The hospital was to be managed by a committee of management elected by the subscribers; the honorary staff were to be elected by the same committee. The number of the staff was left to the discretion of the committee, and their term of office was limited to two years, with eligibility for re-election at the expiration of that period. The qualifications for such office were, in the case of dentists, registration under the Act, and eligibility for election—not necessarily election—as a member of the Dental Association; and in the case of the medical and surgical staff, the same requirements as at the Melbourne Hospital. As to the privileges of subscribers, in them were vested the final control of the hospital, and election of the committee of management and of auditors. Annual subscribers were entitled to recommend five patients annually, and to have one vote at every meeting; whilst life governors were to have three votes and to recommend twenty

patients annually. Finally, the hospital was to be open for gratuitous advice to every poor applicant suffering pain, and for any operative assistance that might be immediately necessary, whilst necessitous persons requiring special operations were to be treated only on the recommendation of a subscriber, subject to the approbation of the senior dental officer of the day. In accordance with these and further recommendations, the subscribers to the hospital were called together on 4th July, 1890, when the above rules were adopted and a committee of management duly elected. In their hands, therefore, rests the future of the proposed hospital.

And here, gentlemen, must end my account of our stewardship. The brief *résumé* which I have endeavoured to make will, I hope, suffice to show not only that the time since the passing of the Act has not been wasted, but that progress has been made upon safe and equitable lines. Now that all the preliminaries have been thus satisfactorily settled, it rests with you to reap the fruits of all this toil. To the dentists of Victoria I would say, join the Dental Association, and subscribe to the Dental Hospital. With the former are bound up the best interests of your profession. Its aims must surely commend themselves to your warmest sympathy. As a profession, what can be more important to you than to support and protect the character and interests of all recognised members, to suppress malpractice, to have a body prepared to do all this, and in addition authorised to take steps to effect improvements in the practice of your art, to advance and encourage its study in all its branches, and to act as a benefit society for the relief of poor and necessitous members and their widows, children and other relations. The gain by belonging to such an association is great, immediate and personal, whilst by its increase in numbers the power of the Association is still further enlarged.

Again, as regards the Dental Hospital, it is your duty, no less than your advantage, to become subscribers. I must own that, so far, the response of your profession to the appeal for the support of such a public institution, of its importance and its charity has been, in my opinion, with one conspicuous exception, somewhat disappointing. I should have thought that it was in the power of some of the wealthier dentists to so contribute as to place the proposed Hospital beyond any reach of pecuniary want for years to come. And I am in hopes that this appeal may be the means of inducing some one to make a start in such well doing, for I



am convinced that it only wants a start to make such giving epidemic.

To the members of the Association especially I would address strong words of congratulation. Though less than half a hundred in number, you start better equipped than many similar bodies have been, and you can point to genuine progress at the close of your first year's existence. I believe you have adopted only such restrictions as to membership as are wise and practicable, that by your very existence you must raise the status of your profession, and that you will form an influence for good such as can flow only from the efforts of a corporate body with high aims and good reputation. I trust, therefore, that before the close of your second year, your numbers will become at least quadrupled, and that your council will thus be encouraged to persevere in the good work which it has already entered upon, and for the accomplishment of which it needs increased support, financial as well as otherwise.

And as regards the Dental Hospital, which will soon be in actual operation, once the public see that it is a charity deserving of support, actually supported by the profession most interested in it, and established and governed upon satisfactory lines, and in a manner to which no exception can be taken, I feel sure that it will have the support which in this colony is always given to a deserving charity; whilst the Government which has made the establishment of such a hospital a legal necessity, will, I am equally certain, not be backward in placing it upon an equal footing, as to site and subsidy, with other similar institutions, the more so since those connected with it have already shown their great interest in it by the warmth of their support and the reasonableness of their proceedings.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

### American *v.* European Diplomas.

THE comparative ease with which American students of medicine succeed, after a couple of years' scientific and clinical instruction, in obtaining diplomas entitling them to engage in professional practice, has long been held to detract from the value of such qualifications when they are contrasted with the laboriously-earned doctorate or license of European universities and colleges. Even in America itself the leaders of professional opinion admit the inferiority of their

own educational requirements, and would gladly welcome an improvement in the direction of greater stringency in the regulations relating to study and graduation. They justly urge that the five, and often six, years of preparation that young men essaying to become practitioners of medicine must undergo in this country and in the principal countries of Europe, must of necessity result in their becoming more adept as healers of the sick, more skilled as diagnosticians, and better able to direct the rational treatment of disease than students in American colleges, who, after a few months of technical training, are sent out among the people as physicians and surgeons. While, however, we accept the truth as it is thus demonstrated, we must also extend an ungrudging admiration to the distinguished band of medical men who have, by their incomparable achievements, advanced the science and art of medicine across the Atlantic Ocean, who have elevated themselves to the highest pinnacle of fame, and have contributed right nobly to the progress that has marked the recent history of our profession. What they have accomplished, we, who profit now by their discoveries and improvements, can best judge the value of, and no one who fairly estimates their work and its results will hesitate for one moment to accord a hearty admiration of their achievements. But, at the same time, it will be remembered that it is not the educational system of the country that is to be credited with the benefits thus conferred, but that they have been the gifts of men whose individual efforts have lifted them personally high above the rank and file of their contemporaries; whose genius has led them with an irresistible compelling force to the investigation of disease, and whose powers have been developed, not as the consequence of their pupilage so much as the result of their own innate capacity of searching out and comprehending the secrets of pathology.

It is significant that this question of the comparative value of foreign and American diplomas is just now being discussed in the home journals in a way that suggests a strong desire on the part of those best calculated to judge to devise a remedy for the deficiencies that exist. Our New York contemporary, the *Medical Record*, quite recently devoted a lengthy leading article on the subject, being led thereto by the appearance of a paper in the *Journal of the American Medical Association*, from the pen of Dr. Potter, of San Francisco. Dr. Potter bluntly confronts his countrymen with the indisputable fact that foreigners do not regard American diplomas, as a rule, with any very great degree of respect, and he plainly indicates that the cause of this want of appreciation is to be found in the low grade educational requirements under which they are obtained.

The *Record's* comments on this communication are instructive and to the point. They show very clearly that the primary root of the whole trouble lies in the conditions under which the average college in America is "run" as a business concern for the benefit of the faculty. "At present," it is affirmed, "it is to the pecuniary interests of these 'faculties' to attract as many pay-students as possible. This can be best accomplished by making the requirements for graduation as light as possible." And it is further asserted that, "a recent loudly-heralded attempt on the part of a prominent college to make even a three-year curriculum obligatory was speedily abandoned when it was found that the faculty pocket-book would severely suffer."

It is easy to understand that revelations of this description, reflect-

ing, as they do, unfavourably on the national institutions, are made with a considerable degree of reluctance; all the greater, therefore, should our sympathy be with those who by thus publicly avowing their shortcomings, show an evident desire to remove the disabilities under which they labour. And we earnestly trust that the remedy for existing educational defects in America may ere long be forthcoming. Endowment is naturally the cure for the evil that suggests itself, but it may well be questioned whether that alone will prove effectual. The barrier to incompetence which acts so efficiently in European countries is the existence of a State regulation by which a minimum qualification is exacted from all practitioners of medicine, and some such means as this will probably find adoption by and by in America also.—*Medical Press.*

### Over One Hundred Men Poisoned at a Free Tea.

BY G. ELAND STEWART, L.R.C.P.LOND.

ON Wednesday evening, September 10th, a tea was given by Miss White to 170 men employed in paving the Fulham Road with wood. The tea consisted of boiled beef, ham, and tea, and was partaken of freely, but the next morning more than 100 men were suffering from symptoms of irritant poisoning, which commenced with severe vomiting and diarrhoea, and great pains and tenderness in the epigastric and hypogastric regions, with much loss of power in the lower limbs. There was general tremor and the patellar reflexes were considerably exaggerated. The tongue was coated with a white moist fur, excepting that there were oval patches where the fur was absent. There was no headache, but occasional shooting pains in the head. There was no contraction, dilatation, or inequality of the pupils, but a mist appearing before the eyes was frequently complained of. There was much prostration, and in several cases alarming collapse. The pulse was quick and small, but there was no elevation of temperature. There was almost complete loss of appetite, and only certain kinds of liquid food were tolerated, other kinds causing immediate vomiting.

On the third and fourth days aching was complained of in the teeth and gums, and a number of ulcers appeared on the gums and on the inner surface of the lips and cheeks, and in some cases on the anterior pillars of the soft palate. In many of the cases there was a blue line on the edge of the gum, as in lead poisoning; but this only occurred in those who had tartar around their teeth. The teeth were also said to feel loose. The urine was high coloured, and in one case a cloudy precipitate was formed on the addition of nitric acid, which did not disappear on warming, and which was not formed by boiling alone. Underneath the precipitate was a deep brown line. There was a nasty taste in the mouth for days, which could not be got rid of, no matter what was taken. There are, I believe, no deaths up to the present.

My cases have been treated with ice and oatmeal water, and bismuth and opium internally, and hot fomentations to the abdomen. They are all doing well. Many of the men have returned to work, and only twenty are now absent, and it is believed most of these will return to-morrow (Thursday, the 18th Sept.).

It was stated by many of the patients that the boiled beef

was wrong, and one man described it as "rotten." Several took home portions of it to their wives and families, and these have been seriously ill. The water-carrier boys, who had the bones given to them, have also been very ill. I have noticed that those who drank the most tea have been the most severely affected; but then perhaps they ate the most beef, or the poison, whatever it is, was more soluble in a larger quantity of fluid.

I append report of analysis of material vomited by a patient on September 10th :

*Report on Analysis of "Poisonous Fluid," from E. Stewart, Esq.,  
L.R.C.P., Fulham, S.W.*

The sample, consisting of ten fluid ounces of semi-fluid whitish matter, was ascertained to be a portion of vomited matter. The circumstances and symptoms indicated the presence of some irritant poison in some tea partaken of by a large number of individuals. Microscopic examination of the solid matter failed to bring to light any noteworthy fact. An inspection of the various vessels and utensils used in the preparation of the tea did not indicate any source of contamination. The vomit was, therefore, rigidly examined for the presence of poisonous metals. Lead, copper, mercury, tin, arsenic, antimony, zinc and barium were particularly sought for, and no indication of a trace of any one of them was obtained. The poisonous acids and their salts, such as oxalates, cyanides, carbolates, &c., were also found to be absent. The commoner poisonous alkaloids were also tested for, with negative results. We have, therefore, to report that, in the vomit before us, there is no indication of the presence of any irritant poison. Unless it were possible to examine minutely both the separate actual ingredients in the "tea," and some of the identical fluid consumed, it is obviously impossible to account for the symptoms with any degree of certainty.

WRIGHT, LAYMAN and UMNEY.

The strange fact is that no more meat and fluid, similar to that taken by the men, is procurable, although it is stated a quantity was left. I myself believe the poison was contained in the boiled beef, that it was the product of decomposition, and that it may be a ptomaine.

I have just received an anonymous letter stating that a case of poisoning by bacon occurred in a house close by: that this bacon caused poisonous symptoms when given to a dog, and that had the case been investigated, the present would not have occurred. It is also requested that for the public good the case should be investigated, the name of the house being given.—*The Lancet*.

## Death during the Administration of Methylene at South Devon and East Cornwall Hospital, Ply- mouth. Necropsy; Remarks.

(Under the care of Mr. R. H. HUGHES.)

It is of importance to record the deaths that take place during the administration of anæsthetics and apparently due to them; we therefore publish below a short statement of the case of a man who died whilst inhaling the preparation in use as methylene or methylene bichloride. There are not many hospitals in which this anæsthetic agent is employed to the extent it appears to be in this hospital; it would not be advisable, however, to draw any conclusions as to the rate of mortality.

to be expected without further details than those at our command. Deaths caused apparently by the inhalation of methylene are rarely recorded; they do not appear, however, to differ much, if at all, from those which result from chloroform, either in the sudden appearance of symptoms or in the post-mortem changes found. Several were recorded by Dr. Junker\* in his paper on Methylene, most of which had occurred in London hospitals. We would also refer our readers to the statements by Dr. Buxton† on the use of this anæsthetic, which he considers as in nowise superior to chloroform, and to our columns.‡ Methylene has given satisfaction to many operators, Sir Spencer Wells, Polailon, Fort, Laborde, and others. For the account of the case we are indebted to Mr. W. Gifford Nash, house surgeon.

N. M.—, a pauper, aged fifty-one, was admitted to the hospital on Sept. 3rd, 1890, suffering from necrosis of the left tibia and disorganisation of the left ankle-joint. He gave a history of syphilis sixteen years ago. There had been some necrosis of the right tibia, and the nasal septum was almost completely destroyed.

He was prepared for amputation of the leg on Sept. 5th, at one o'clock, and two hours previously an ounce of brandy was given. Methylene was administered, and after three or four minutes' inhalation, when about three drachms of methylene had been given, he commenced to struggle violently, and became very cyanosed. About a minute later he suddenly ceased struggling, the colour of the face changed to a leaden hue, and the pulse and respiration stopped. The legs were at once raised, and the head lowered; artificial respiration commenced and carried on for half an hour; brandy and ether injected; hot flannels applied over the heart, and the interrupted current applied with one pole over the heart and the other over the left side of the neck. At the commencement of artificial respiration the patient gave two deep-drawn gasps, but otherwise showed no sign of life. He appeared to die from sudden syncope.

At the necropsy the brain was found to be natural, the lungs much congested and œdematous at the bases; the heart ventricles were dilated, with very thin walls; heart substance very light colored, soft and friable; endocardium pale; no valvular lesion. The ventricles were in diastole, and contained fluid blood. The kidneys were large and congested. The spleen was enlarged, and at one spot presented the cicatrix of an old gumma. The liver was small, hard, and cirrhotic.

*Remarks by Mr. W. Gifford Nash.*—Methylene is almost invariably administered at this hospital, and is given on an average about 400 times a year. It is five years since there was a death under anæsthesia.—*The Lancet*.

### Death under Chloroform at Brisbane.

DR. WILLIAM S. BYRNE, honorary physician to the Brisbane General Hospital, has favoured us with the following account of death during the administration of chloroform:—

"N. M.—, a man of intemperate habits, and about forty years of age, was given chloroform on August 12th for the purpose of having

\* *Brit. Med. Jour.*, vol. ii., 1883, p. 104. † *Ibid.*, vol. ii., 1888, p. 204.

‡ *The Lancet*, vol. ii., 1874, p. 881; vol. ii. 1876, p. 463; vol. i. 1884, p. 1171, &c.

several fistulæ in the perineum opened up. Dr. Love administered the anæsthetic, and I was about to operate. The patient was prepared in the usual way, a brisk purge having been given the night before, and no food being allowed for six or seven hours prior to the operation. About thirty drops were sprinkled on a flannel, and for about ninety seconds everything seemed to be most satisfactory, but shortly after some more chloroform had been dropped on the flannel the patient became very excited and the face suffused. Immediately after his pulse became very weak, and I called Dr. Love's attention to it, but then it had stopped altogether, although the breathing was quite as good as one could wish. The chloroform was at once removed, and we waited the development of events, trusting the pulse would improve as the man was breathing so well; but after the space of fully forty-five seconds his breathing began to fail, and artificial respiration and all the usual remedies were used for a long time, but without avail. I was present at the post-mortem examination, which disclosed lungs infiltrated with tubercle, a heart healthy as to the valves, but walls of right ventricle rather thin, and a liver slightly fatty. This case is interesting from the fact that the breathing remained good for fully forty-five seconds after the pulse had ceased beating, and only then began to fail. I may mention that the amount of chloroform used did not exceed one teaspoonful."

In persons of intemperate habits more or less fatty changes are found in the organs, as in this case, and the heart sharing this morbid change is more prone to succumb to unwonted exertion. The prolongation of the period of struggling, which slow chloroformisation renders inevitable, seems to be peculiarly unfavourable to fatty hearts by the greater strain it causes. The muscles of the abdomen and chest walls become rigidly fixed, and so respiration and blood circulation are hampered; and the heart, called upon to contract and dilate under increased pressure, fails to accomplish the task, and fatal cardiac syncope ensues. The post-mortem examination in the case mentioned above showed, moreover, that the ventricular wall was thinned, and so a further disabling factor was at work. The publication of such cases is of great value; indeed only by this means can we hope to accumulate trustworthy clinical knowledge of the action of chloroform.—*The Lancet*.

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### Bromide of Ethyl in Dental Practice.

THIS anæsthetic—associated in England with the name of Nunneley, of Leeds, who first employed it in 1849—was vaunted by Herr Schneider, a leading German dentist, as a useful agent for dental practice. His communication made to the Munich Odontological Congress of 1888 led to its pretty extensive employment, and Dr. Frederick Herz, a Viennese dentist, writing in the *Internationale klinische Rundschau*, quoted a number of successful cases. It was claimed that bromoethyl produces unconsciousness rapidly and is recovered from with equal celerity, and has no unpleasant after-effects. Its action upon the heart was by Wood stated to be slight, although that investigator credits it with the property of lowering vascular tension. On the other hand, further experience has not borne out the good report Schneider, Herz, and others gave of it, for quite recently Dr. Mittenz-

weigs has written an earnest protest against its employment by dentists, since three cases of poisoning from its use have occurred in Berlin alone. Nor would it appear that bromo-ethyl is as free from after-effects as was at one time supposed, for Dr. Terrillon found vomiting to follow even small doses, while Dr. Julian Chisholm, after prolonged experience of its use, says it can only be employed for very brief operations, as its effects are most evanescent. Marion Sims regarded it as distinctly dangerous when any renal disease existed. Many observers have found that the drug failed as an anæsthetic in a large proportion of the cases in which they tried it. Deaths have been reported from its use by Levis and Pancoast in America, also by Wolff and Lee, and to these we must add Dr. Mittenzweigs' three cases, in which not more than 20 grammes of the material were employed. An additional warning may be given to those who intend using bromo-ethyl, and that is that it is extremely difficult to obtain samples free from impurities—for example, free bromine, bromoform, carbon bromide, and traces of phosphorus.—*British Medical Journal*.

### Removal of Breast during Hypnotic Sleep.

DR. SCHMELTZ, of Nice, has recently\* recorded a case in which he removed a sarcomatous breast during anæsthesia caused by hypnotism. The patient was a girl, aged twenty, who was easily thrown into the hypnotic state. The operation was performed in the presence of Drs. Lauza and Barriera, and the entire organ, together with the aponeurosis of the pectoralis major, was removed by the oval incision. Five drainage tubes were inserted and the wound was closed with thirty-two metallic sutures. The operation lasted an hour. The patient remained absolutely insensible, in a condition of the deepest anæsthesia, such as is only seen after large doses of chloroform. Dr. Schmeltz says: "I operated very slowly and quite at my ease; the patient even tried to encourage me by her words; she seemed very gay, and laughed loudly from time to time as if to show that she felt no pain. In order to make the operation easier for me, she turned herself about so as to place herself in the most favourable position, keeping her right arm stretched out so that no assistant was required to keep it steady." She was kept under observation for the rest of the day, and having been told not to feel pain and to have a good night, she obeyed these instructions in the most docile manner. The wound was completely healed on the fifteenth day. The only symptom worth mentioning, which Dr. Schmeltz observed in the patient during the operation, was great pallor of countenance, without any dilatation of the pupil or weakening of the pulse. The tumour weighed 2 kilogrammes.—*British Medical Journal*.

### The First Use of Chloroform.

IN reference to the paragraph published a short time ago, in which it was stated that Mr. James Darcie Morrison, dentist, now of 27, Grange Road, Edinburgh, was the first human being on whom Sir James Simpson tried the effect of chloroform, and in which the claims of Mr. Waldie of having suggested the anæsthetic to the discoverer

\* *Gazette Médicale de Strasbourg*, July 1st.

were also alluded to, Mr. Morrison writes to us as follows :—"All honour to the chemists who, from time to time, have played a part in perfecting chloroform. It will be remembered by many that after some great professional triumphs of chloroform, which made Professor Simpson's operations at all practicable, there was a general talk of at once raising a monument to his honour, so that during his lifetime he might partly realise how very highly he was respected. Meeting by accident the great doctor one day, I took the opportunity to congratulate him on the near prospect. Walking together for some little distance, I spoke of the chemists who had led up to the great crowning success, which success I hoped he would long be spared to enjoy. Thanking me for my good wishes, he took notice of the several chemists I had named, and said that 'most certainly they had all more or less contributed, and to Waldie he owed much.' What the 'much' meant I did not then know. So far as I myself am concerned, Professor Simpson has himself inserted my letter in full in the announcement of the discovery on November 10, 1847, which makes the first operation performed under chloroform, and on my person, a matter of history which, of course, can never pass away."—*Chemist and Druggist*.

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### Mouth Breathing.

THE number of persons who habitually breathe through the mouth is very large, and they seem to live on in blissful ignorance of the damage they are inflicting on the structures thus desiccated, and inflamed by the passage of a current of air along a canal which Nature, in her infinite wisdom, only intended to serve for the downward path of food, and possibly, in exceptional circumstances, of drink. Indeed, that mouth breathing is an evil practice is only partially recognised, though the slightest reflection would suffice to show that damage must accrue to the lungs from the admission of a draught of unwarmed, unmoistened air to the mouth and throat, from the contact of this in-current of air with the mucous surfaces. The immediate effect of mouth breathing is a dry and parched condition of the pharynx and tongue, producing cough and laryngeal irritation. We have just glanced over the list of affections which laryngologists of eminence assure us are, more or less, associated with this pernicious habit of breathing through the mouth, and the list is long enough to make all but the most reckless pause and consider whether some means cannot be devised in order to induce the organism to forego this baleful habit in favour of the more rational, because the more physiological plan. Unfortunately, it often happens that, while the spirit is willing the flesh is weak, and the presence of some defect in the construction of that very useful appendage the nose, will effectually hold in check, and render nugatory the most praiseworthy intentions. Thus resolution is sickled o'er with the pale cast of thought, but it is here that the delicate attentions of the scientific laryngologist may be usefully requisitioned. He knows full well how to rectify the proportions which Nature has left or has allowed to be brought about, and by restoring the normal diameter of the nasal passages he enables the unhappy sufferer to relinquish snoring and other vicious habits conducing to by mouth breathing, without any more distressing symptom than a little anæmia of the pocket.—*The Medical Press*.



### Death under Chloroform.

THE patient, G. G., aged fifty, a labourer, was a feeble man having angular curvature of the spine of fifteen years' duration. He complained of having suffered from bronchitis for a long time. He was admitted for an abscess of the left thigh. On July 23rd the abscess was opened under chloroform, the patient recovering well from the anæsthetic. On August 4th, the abscess not draining freely, he was again put under chloroform and a counter-opening made. On August 27th the temperature again rose, and, as the patient was rapidly sinking from the discharge, it was decided to slit up the sinus which had formed. For this purpose chloroform was administered on a mask on September 3rd. The patient had just got beyond the struggling stage and was becoming rigid, when the pulse suddenly stopped, together with the respiration. Artificial respiration was employed for half an hour. There were one or two spontaneous gasps within the first five minutes; none afterwards. The pulse was never perceptible, nor could the heart sounds be heard with a stethoscope.

*Post-mortem Appearances*—Lungs: The left was firmly adherent at its base and slightly over the rest of its surface; the right was adherent all over; both were œdematous and showed emphysema and bronchitis. Heart: Ill-nourished and flabby, especially the right side; the left ventricle contained fluid blood, the right was nearly empty; the valves were healthy. Aorta atheromatous. Liver slightly fatty. Kidneys: right slightly fatty; left entirely destroyed by tuberculous disease. Brain normal. The left psoas muscle was atrophied, and contained some caseous material; there were caries and ankylosis between the third and fourth lumbar vertebrae with disappearance of the intervertebral substance.—A. H. SMITH, House-Surgeon, London Hospital.—*British Medical Journal*.

### Exalgine.

M. BARDET, after an examination of seventy-five applications, concluded that exalgine possesses remarkable analgesic powers, particularly in congestive and dental neuralgias and in congestive migraines with pain above and below the orbits. He found it important, however, to employ real exalgine; that is to say, the *methylacetanilide* which melts at  $101^{\circ}$ , because the isomers do not possess the same properties. Thus in England there is a product sold under the name of exalgine which is *aceto-orthotoluid*, a very different substance in a therapeutic sense, as it is inactive, while even in the doses of six grains, exalgine produces marked effects.

M. Fereol reports that he had not obtained results equally favourable with those reported by M. Bardet; he had often been obliged to discontinue the remedy without having relieved pain, and in some cases he had observed cyanosis from its use. He prescribed it in the amount of 0.50 centigr. per day.

M. Desnos declared that if the previous speaker had not obtained desirable results from the use of exalgine it was because the dose employed was too small. He himself administered as much as 1.50 grm. in twenty-four hours and had secured relief in very severe cases of neuralgia; he had, however, also observed cyanosis from its use.

M. Dujardin-Beaumetz summarised the advantages and disadvantages in the use of the remedy. On the one hand, in many cases it removes pain and relieves obstinate neuralgias; on the other hand, when one is obliged to employ a large dose and continue the use of the remedy for some time, phenomena of vertigo make their appearance, and although these are unattended by danger, they require attention; furthermore, exalgine is insoluble. Exalgine in his opinion is a useful agent, but is inferior to antipyrin.—Discussion at the Congress International de Therapeutique, *Le Bul. Medical*.

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### “ Understandings ” with Locum Tenens.

A VERY remarkable decision has been given touching the obligations of a *locum tenens* to his principal by Mr. Montagu Williams. Mr. Robert Kennedy, of 163, Ossulston Street, had engaged the *locum tenens* at the rate of three guineas a week. His duties, according to the *Islington Gazette*, which reports the case, were to attend the patients, to receive petty cash, and give an account to witness on return. The “understanding” was that the principal had an exclusive right to the services of the *locum tenens*. Before the Court the *locum tenens* was charged with embezzling £14, which he is alleged to have received. The magistrate ruled that, as there was no written agreement and nothing had been said as to rendering account, the prisoner was not a servant, and was dismissed. We can only record the case for the instruction and warning of principals and assistants alike. The decision seems to us a very shocking one. The understanding was sufficient to serve as a basis for the claim of the *locum tenens* to be paid, and should surely have been enough as a basis for the claim of the principal to a proper account. But law is—law.—*The Lancet*.

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### Hypnotism in Belgium declared Illegal.

WE learn from our contemporary, the *Medical Press*, that the Chamber of Deputies has recently enacted certain laws rendering the practice of producing hypnotism illegal except under certain conditions, and the practiser liable to fine and imprisonment. Whoever makes an exhibition of hypnotising subjects renders himself liable to imprisonment for a period of from fourteen days to three months, and to a fine between the limits of 26 to 1,000 francs. Any person, unless qualified as a medical practitioner, who hypnotises any person under eighteen years of age, or anyone of unsound mind, renders himself liable to one year's imprisonment and a fine of 1,000 francs, even although the person hypnotised shall not have been exhibited. It is also an offence rendering the offender liable to imprisonment, to procure the writing or signature to any document conferring legal powers, and any individual making use of any document so made or signed renders himself liable to a like punishment. Our contemporary asks the pertinent question whether it is not quite time such a law was enacted and enforced here?

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### An Injection of Cocaine followed by Death.

SIMES, in a recent number of the *Gaz. degli Ospitali*, records a somewhat remarkable case of death occurring after an injection of cocaine into the urethra. The patient was a man of twenty-eight years of age, and preparatory to undergoing the operation of internal urethrotomy, had a gramme of a 20 per cent. solution of cocaine injected into his urethra. Saving his urethral stricture, the patient was in excellent health. Immediately after the injection the following phenomena supervened, namely, contraction of the muscles of the face, dilatation of the pupils, stoppage of the breathing, and violent epileptiform convulsions. The convulsive signs continued to increase in severity, the respiration became more and more feeble, cyanosis became intense, and at the end of about twenty minutes, despite every care, the patient died. At the autopsy the lungs were normal, but extremely congested; the left ventricle contained no blood.—*The Medical Press*.

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### Overdose of Chloroform.

ON September 10th, while performing a lateral lithotomy on an Arab boy, about sixteen years old, it was suddenly found that the patient had stopped breathing. He had been got under perfectly quietly, and he had evidently simply got too much of the anæsthetic. It was still being administered when the stoppage of respiration occurred. Artificial respiration, with head thrown back over the edge of the table and with the ammonia bottle at the nose, was kept up for, I think, nearly two minutes. The time was not taken, however, and it may have been more or less. Then very feeble respiration began and gradually strengthened. At the beginning neither the pulse at the wrist nor heart impulse could be felt, but throughout there was a feeble flickering seen in the lines of the carotid vessels in the neck. Thus there is no doubt that respiration was mainly affected, and artificial breathing was sufficient to bring the patient round.—H. HERBERT, Surgeon, I.M.S., Aden, September 17th, 1890.—*The Lancet*.

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### A New Disinfectant.

IT was pointed out some time ago, that camphor when submitted to the fumes of sulphurous acid would absorb a very large amount of the gas and again liberate it on exposure in a warm room. The preparation thus formed is called thiocamph. It is liquid and may be dissolved in alcohol or used in its pure state. Under ordinary circumstances it will liberate sixty times its volume of sulphurous acid. It is certainly valuable and will have a large use in the sick room during and after the reign of contagious diseases.

It was first prepared in this country by Parke, Davis & Co., who have liberally given it to the medical profession without trade mark or copyright. This courtesy to the medical profession cannot be too highly commended and furnishes an excellent model to some of our wholesale pharmacists.—*The Therapeutic Analyst*.

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## OBITUARY.

WE learn with regret that Alexander Fraser, L.D.S.I., Coburg Villa, Largs, died on the 16th of September, aged forty-four years. He was a member of Council of the West of Scotland Branch. He was also a Captain in the Local Volunteer Corps, a Bailie of the town, and at one time editor of a local paper. He was buried with military honours.

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## MICROSCOPICAL AND LABORATORY GOSSIP.

WE have received the following notes for this column :—

*Unusual persistence of milk teeth.*—Although doubtless cases of persistence of the milk teeth throughout life are fairly common, I think the present one is worth recording. The patient is a lady of forty-one years of age, all her permanent molars are well developed and normal, including the four wisdom teeth, the right upper second temporary molar, the right and left upper temporary canines and the right lower temporary canine are all present, firm, and doing active service as part of the permanent dentition. I hope that many of the readers of the Association Journal will write to assure me that the above case is by no means unique, and it is rather in the hope of attracting to our pages some of the mass of unrecorded information upon this and like matters of anatomical interest that must exist that the above note is inserted.

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*Staining with Chloride of Gold.*—I have long regarded this agent as one of the most useful for the observation of the dental tissues. I know of no other stain which so clearly marks out the minute anatomy of the soft tissues which penetrate bone and dentine; in fact, its excellence as a selective stain would long ago have obtained for it a much more widespread popularity were it not for the fact that it has been generally regarded as specially liable to failure in manipulation. Almost all the recognised textbooks speak of it as a very difficult stain to employ successfully, and as requiring a very lengthy and troublesome method of procedure, and as only applicable to perfectly fresh tissues. I have found, after some eight years of pretty constant use, that the subjoined method is easy to employ, does not take long, and is, moreover, both certain and fairly permanent in its results.

First, about the tissues to be stained. They do not require to be very recently dead ; the fresher they are the more quickly they take the stain, but I have stained scores of sections of teeth and bone that had been severed from the living body for a long time, sometimes for weeks. It is better to avoid as far as possible the use of metal instruments, bone, wood or quill being preferable ; the use of steel does not, however, doom the staining to failure. The method I adopt is as follows :—

(a) Wash the sections in solution of bicarbonate of soda.

(b) Put some 1 per cent. solution of chloride of gold in a watchglass, test it with litmus paper, and if it be acid add bicarbonate of soda by drops till it is neutral ; place the sections in the solution and cover the watchglass with some lid to keep it in the dark (the lid of a china pot such as is used for potted meat serves very well) for from half-an-hour to an hour, until the sections look straw-coloured.

(c) Remove sections from staining fluid to distilled water, and leave them covered over (they must never be exposed to light for more than a few seconds) for a few minutes.

(d) Put some 1 per cent. formic acid in a watch glass, float the glass in hot water, put the sections in the acid, cover them over and keep them in the dark and fairly hot until they turn crimson. This generally takes about an hour, but the operator must be guided by the tint of the sections, which he must look at from time to time. A simple way to do this is to fill an old china anchovy paste pot with hot water, place it on a stove, float the watch glass containing the acid and the sections in it and cover it up with its own lid.

(e) When stained immerse the sections in cold distilled water for about half-an-hour.

(f) Dry sections and mount them in glycerine jelly. Avoid Canada balsam. I have always found specimens mounted in Canada balsam go wrong. The bottle of gold chloride must always be carefully kept in the dark.

I have found this method very successful and very easy ; moreover, I have many sections now in my possession which are quite eight years old and have not faded in the slightest degree.

ARTHUR S. UNDERWOOD.

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## ANNOTATIONS.

INDIA still seems a land of romance. We read in a contemporary of a dentist who received as a fee for extracting two teeth for the Nizam of Hyderabad the nice little sum of 8,000 Government rupees.

IN our last number, which we may remind our readers was twice the ordinary length, some errors have been pointed out which we take this opportunity of correcting. The list of referees appointed to receive papers and examine them (page 530) should read as follows :—Messrs. T. Stack, J. Smith, E. Lloyd Williams, J. H. Mummery, G. Cunningham, L. Matheson, A. Kirby, W. E. Harding, A. W. W. Baker and C. S. Tomes. Among the names of the gentlemen who were elected to serve on the Representative Board (p. 532), Mr. Johnson and C. West should read S. J. Hutchinson, and Henri Weiss respectively. It is hardly necessary to say that the difficulty of revising the enormous lists of names that occur in the reports of these meetings so as to eliminate all printer's errors and reporter's slips is very great, and that notwithstanding the courteous and ready help of branch secretaries and other officials, mistakes do creep in from time to time; still we freely offer our apologies to those gentlemen whose names have been omitted or wrongly spelt, and trust they will attribute these errors to their real cause.

IN an article headed "Dentists and their Qualifications," *The Medical Press* comments in the following manner upon Mr. Campion's paper, Exeter :—"However much we may sympathise with Mr. Campion and with those who agree with him, we cannot affect to believe that this question has at present any but an academic interest; or that there exists the least prospect of its being brought within the range of practical politics. The spirit of the day as it affects the great medical corporations and the Medical Council is strongly against the multiplication of distinctive qualifications. At present the number of candidates for the L.D.S. diplomas is not great, and of these an unduly large percentage fail to pass—a fact which has been used as an argument against Mr. Campion's propositions. If the number of candidates were larger, and if a very small minority only were usually rejected, a fair argument might be brought forward in favour of increasing the severity of the examination, or of insti-

tuting a higher grade in honours. The dental diploma ought to constitute a guarantee—so far as any diploma can do this—that its holder is a highly qualified dentist, and as the science and art of dentistry advance examinations ought—so to say—to keep pace with them. The dental neophyte endowed with uncommon capacity and ambition can at present distinguish himself either by acquiring a higher qualification in surgery or a degree in arts, and this course, which has been in late years adopted by many of those who are now leading practitioners, is likely to remain for a long time the only source through which such aspiration may be legitimately satisfied.”

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WE cannot refrain from quoting the subjoined comment on illustrated journalism from the pages of our contemporary *The Lancet*:—“Whilst fully admitting the skill and enterprise with which our young contemporary, the *Daily Graphic*, is engaged in attempting to furnish a pictorial record of current affairs, and giving the management full credit for their endeavour to arouse an interest in the work of our great metropolitan charities by illustrations of hospitals and their inmates, we feel constrained to point out that such representations may, if care be not exercised in the selection of ‘subjects,’ tend to defeat their purpose. This caution is, we think, justified by the publication of a sketch in the issue of that journal for Oct. 6th, to which a correspondent has drawn our attention. The artist has depicted what purports to be a scene in the ‘surgeon’s room’ of a well-known hospital, and our correspondent remarks that ‘if patients see that the privacy of hospitals is liable to be invaded’ in such a manner, ‘they will not resort to hospitals except in cases of the last necessity.’ We confess that there is some reason in his remark, and could at least have hoped that the artist had selected some other subject for the display of his talent. To be sure, he might quote the example of not a few pictures in the Paris Salon (notably one now to be found in the Salpêtrière Hospital) in justification of his selection; but the taste for such realistic reproductions of the out-patient room has happily not hitherto been cultivated on this side of the Channel.” Another evil is almost unavoidably mixed up with this popularisation of professional details, namely, the prominence given to the names of practitioners in the course of the articles referred to.

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WE have received a letter from a correspondent at Gothr, containing an account of a very considerable resection of the right infraorbital nerve; our correspondent has also forwarded to us the piece of nerve removed. The patient had suffered from peripheral facial neuralgia for some time, and all the ordinary means likely to afford relief, drugs, &c., and local applications of electricity had been tried without success. Dr. E. Meusel finally resolved to operate, and proceeded in the following manner. The infraorbital nerve was divided at the point where it leaves the canal by the infraorbital foramen, the zygoma was divided at both ends and the flap attached to it being raised, the nerve was again divided at its point of entrance to the infraorbital canal, and the whole length of the nerve contained in the canal (about three centimetres in length) was bodily removed. The bone of the upper jaw appeared to be preternaturally hard, and the infraorbital canal constricted. The cure was complete, and none of the other branches of the fifth giving any subsequent trouble, the cause of the neuralgia was supposed to be peripheral and not central.

WE are requested to state that Mr. Briggs, of Torquay, did not give any demonstration (as announced) at the recent Annual Meeting at Exeter.

Mr. J. H. CROUCH, dental surgeon, has been elected a member of East Sussex County Council (for Hove).

GUY'S HOSPITAL DENTAL SCHOOL.—The entry of new students up to October 1st has been nine in number. There are now twenty students in the school.

STATEMENT of operations performed at the Dental Hospital of London, for three months ending July 31st, 1890.

	May.	June.	July.
Extractions :			
Under 14 ... ..	455	406	399
Adults ... ..	1043	1235	1274
Nitrous Oxide ... ..	875	1031	898
Gold Fillings ... ..	356	343	291
Plastic ... ..	1277	1144	1082
Treatment of Irregularities of			
Teeth—cases and visits ... ..	110	80	74
Artificial Crowns ... ..	24	12	26
Miscellaneous Cases ... ..	385	436	403
Total ... ..	4525	4687	4447
E. PREEDY,	} <i>House Surgeons.</i>		
W. R. BARRETT,			
E. H. L. BRIAULT,			



STATEMENT of operations performed at the National Dental Hospital, for three months ending July 31st, 1890.

	May. 1895	June. 1910	July. 1764
Number of patients attended ...			
Extractions :			
Children under 14 ...	371	183	241
Adults ... ..	529	413	293
Under Nitrous Oxide ...	702	705	639
Gold Fillings ... ..	103	141	127
Plastic ditto ... ..	388	406	398
Irregularities of the Teeth ...	168	167	185
Artificial Crowns ... ..	9	15	21
Implantations ... ..			3
Miscellaneous ... ..	249	223	247
Total ... ..	2519	2253	2154

WILLIAM FISK, }  
ALFRED MOORE. } *House Surgeons.*

NATIONAL DENTAL HOSPITAL AND COLLEGE.—The annual distribution of prizes and dinner for past and present students will take place at the Holborn Restaurant on Friday, November 21st, when Dr. Benjamin Ward Richardson, F.R.S., will take the chair.

## CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

### The Association and its Branches.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It has given me much pleasure to read the letter from "An Obscure Member" in your last issue, and I trust that by threshing out this matter a clearer understanding may be arrived at. We are all, it is to be hoped, aiming at one thing, viz. : the good of and advancement of the interests of the profession generally, and surely it is unworthy of any member, and without cause, to think so ill of the metropolitan delegates, or to bring such charges and in such a manner. This would infer that honesty of purpose is to be found only with those formulating such charges, and that any variance of opinion must necessarily arise from a desire to domineer and over-rule the wishes of provincial delegates, even after it has been conclusively shewn that in numbers and voting power they form the majority, and could, if they so wished, have it all their own way.

I have too much faith in my professional brethren to believe for one moment that such a spirit can be entertained, except by the very smallest minority, and hope in the future those who have displayed any disposition to carp and cavil may see their error and learn to pull together for the good of the one object we have in view ; and although different subjects may be approached from very different standpoints, let us one and all at least realise that those holding opposite views to our own, may be quite as honest in intention and as wishful for the general weal. Perhaps in this matter the Exeter meeting, with its excellent discussions and candid, though thoroughly good-natured criticisms, may be held up as a bright example for future guidance and imitation.

As to the distinction of *metropolitan* and *provincial* delegates, although I have used the terms I venture to affirm there is no distinction between them, and that except in name they do not really exist, and indeed, with such an Association as ours how can they? Are we not all members of one profession and all striving for the same end? It would be a curious tree that was all trunk without any branches or offshoots, and the latter would fare very badly indeed without the parent stem ; and so the mere accident of location ought not, and in fact does not, affect our membership or individual usefulness.

With regard to the question of a paid secretary, I am quite convinced we have been much better served and our interests far more zealously guarded by that gratuitous and devoted service—which can only have been so efficiently rendered as a labour of love—than we could have been by any paid help, and as long as we can find in our ranks men willing to continue this work, and as long as that work does not exceed the bounds of possibility for one or other of our members to accomplish, surely we should be most unwise to wish for change, but rather, we should be grateful to those who so unselfishly undertake the responsibility and labour, and as far as lies in our power render that service as light and little irksome as possible by unanimous, hearty and loyal support. But whether this view may be held, as I believe it to be, by the vast majority of members or not, one point mentioned by your correspondent ought to claim earnest attention. How is a paid secretary to be maintained out of our insufficient income?

Now, sir, this seems to me a most important matter, and should teach us all the necessity—the duty I had almost said—of placing the funds of the Association in a more flourishing condition and thus render it more powerful to support the dignity and protect the interests of the profession generally, and this can only be accomplished by united and individual efforts to bring all reputable members of the profession into the fold, and there are very many still who ought to be in our ranks. Let us hope that our next Annual Meeting may

find us with largely augmented numbers, and any imagined grievances or misunderstandings lost sight of and entirely banished in the general struggle for the good of the Association.

ANOTHER MEMBER OF THE BRITISH DENTAL ASSOCIATION.

### An Explanation.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In reference to the electro-motor which I took to the Exeter meeting, I regret very much that it could not be shown at work, as the connections at hand were imperfect and others could not be obtained in time. I may also mention that neither the motor nor the mallets were shown as commercial exhibits.

I am, yours truly,

AMOS KIRBY.

### The L.D.S. Diploma.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Mr. Oliver's letter in your last issue is interesting and amusing in the extreme. His attempts at reformation are laudable, and if we consider the rashness and want of taste which characterise his letter I think we may excuse his impudent and sweeping assertions. He mentions a case of his friend in 1881 obtaining the L.D.S.I. without earning it, but this questionable friend's statement may be taken *cum grano salis*. Mr. Oliver studiously omits to mention that these early years have gone by, and with them all possibility of such complaints, if they existed, have been removed.

On enquiry, Mr. Oliver might easily have ascertained that the year 1884 saw the *sine curriculo* examination brought up to the standard of the final curriculum, and with it the fees doubled. It is not my object or desire to enter into the merits or demerits of London or Dublin diplomatists, but if it came to a question of "levelling up" I am afraid our lofty friend would find himself "not quite up to date," and perhaps would be able to see that the field of dental science is not quite so limited as he suggests, but affords ample scope for his fertile imagination. Again, we are lectured at Exeter about our scientific knowledge and skilled manipulation, to say nothing of code and pamphlet distribution, &c. We may form our own opinion about all this theory, but I fear we may look in vain for more practical evidence of the fitness of things.

But, Mr. Editor, I am chiefly concerned with the examination of July, 1890, as a result of which I obtained the L.D.S. diploma, and my protest is further supported by the publication of the examination papers (London, Dublin and Glasgow) in the *British Journal of Dental Science* for September 15th, and I say without fear of contradiction that the "searching" examination of the English college would not have given me much trouble.

The "*sine curriculo*" is a sore point, but does our friend think that, because a man has neither time nor inclination to attend with students, listen to what he knows or can learn at home, and waste valuable time which he cannot afford, that he is best serving his own interests in remaining diplomaless and being thus debarred from appointments, hospital and otherwise? This question answers itself.

I am, yours faithfully,

Cardiff.

THOS. QUINLAN.

### The Discussion on Higher Qualifications.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It seems that in the heavy work of issuing a larger number of the Journal than usual some unlucky slip of the editorial scissors has made me seem, to those who were not at the meeting, to tacitly admit the validity of Mr. Smale's charge of misquoting, and as such a charge is always a serious one, I hope those who are enough interested in the subject will verify the quotations and see for themselves to what extent it is in this case justified.

I am glad to have this opportunity of saying that although I cannot now reply to the discussion in detail I hope to do so on some future occasion.

Yours faithfully,

Manchester.

GEO. G. CAMPION.

## APPOINTMENTS.

HERBERT R. BOWTELL, L.D.S.Eng., has been appointed House Surgeon to the Dental Hospital of London.

WALTER S. HOLFORD, L.R.C.P.Lond., M.R.C.S.Eng., has been appointed Assistant House Surgeon to the Dental Hospital of London.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION

A

*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 11.

NOVEMBER 15, 1890.

VOL. XI.

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Dental Representation on the General Medical  
Council.

THE *Lancet*, in a leading article published on November 1st (which, together with the letter from Mr. Smale forming its text, and some other correspondence, we publish elsewhere), discusses the question of direct dental representation on the Medical Council in a spirit of fairness, and with a manifest desire to be just and impartial, which augurs well for the future treatment of the question raised by the writers of the letters referred to. We desire to approach the subject in the same spirit, and although we view the matter in a very different light from the *Lancet* we do not despair of convincing our contemporary that the difficulties are not insurmountable, nor the proposition altogether preposterous if all the surrounding circumstances be taken into consideration.

The *Lancet* suggests that if a case were made out for

the dental profession similar privileges must be conceded to the other specialities—indeed, that the value of an eye being greater than that of a tooth, the claims of ophthalmologists would be more urgent than those of dentists. We think that the force of this argument is considerably diminished by the fact—so often overlooked in this comparison of specialities—that the branch of dental surgery is protected by a special Act of Parliament; that its registration fees produce a large sum of money which is, under the name of the Dental Fund, in the hands of the Medical Council for a special purpose. The Council administer the Dentists Act of Parliament, they control the expenditure of the Dentists' Fund, and infringements of the Dentists Act come under the cognisance of this body. These are all reasons of weight and importance why the dentists should have a direct representation on the Council, but none of the other specialities are in a similar case, nor can any parallel be drawn between dentistry and ophthalmology in this connection. The *Lancet* humorously reminds us of the relative value of the organs we respectively watch over, but after all the strict parallel to the loss of an eye would be the loss of the whole of the teeth of one jaw, not of one tooth, and such a loss would be grave enough. To some extent we can repair the loss, and this fact may mislead the unthinking public as to the value of their teeth, but it should not mislead professional men. Another argument remains that should not be overlooked, namely, that the registered practitioners of dental surgery are a very much more numerous body, and, therefore, necessarily very much more influential than the practitioners of any other speciality; moreover these numbers are increasing at a greater ratio, and that there are conditions introduced into their education unknown in the curriculum of any other specialist. Almost every human being is constantly in

need of the services of dental surgeons, not one in a hundred needs those of the oculist or the aurist.

Again, why is specialism a defect, or an incompleteness? We fancy there would be some startling aural, ocular, and dental defects and incompletenesses among the laity if their ears and eyes and teeth were relegated to the general practitioner. Surely we are all agreed that in the present state of medical and surgical science it is absolutely impracticable for any human being to become acquainted, even up to a low average standard, with all its departments; the only way out of the difficulty is specialism, and we fancy there will be more and not less specialism as time goes on and science advances. But be that as it may, there can be no doubt that the speciality of dentistry already exists, that its practitioners are enrolled on a Register and protected by an Act of Parliament, and that their fees have created a substantial fund, which is supposed to be devoted to dental interests, and in the disposal of which the commonest principles of representative government would seem to require that dental practitioners should have a voice.

Further, we would remind our readers and our contemporaries that we do not ask the medical profession to forego part of its representation in favour of the dental. There are, as the *Lancet* points out, plenty of our dental *confrères* who are eligible technically, and from breadth of knowledge and experience admirably fitted to serve on the Council in the dual capacity of registered medical practitioners and dental assessors. It would not be difficult to find representative members of the profession in England, Scotland and Ireland, whose experience in the question of medical education, and whose familiarity with dental reform would make them desirable additions to the Council, who would lighten its labours and increase its efficiency. We

are very pleased to notice that the medical press takes a liberal and impartial view of the question, and we think that for the sake of the Council, quite as much as the profession, the suggested change is a consummation devoutly to be wished. Whatever the outcome of this discussion may be, we cannot but thank the *Lancet* for the temperate manner in which they have introduced the question to their readers.

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## ASSOCIATION INTELLIGENCE.

### The Annual General Meeting.

*(Continued from page 649.)*

MR. L. A. COXON, L.D.S.I., read his paper on "The Teaching of the future Dental Student with regard to Mechanical Dentistry," which we publish in abstract.

MR. PRESIDENT AND GENTLEMEN,—The curriculum specifies that the student shall be two years with a registered dentist after passing his preliminary examination, but this is in no way a guarantee that he can make a denture. But for all that he will be put to but little further proof as regards his mechanical knowledge when he gets to the hospital.\*

A little while since I had occasion to speak to a young gentleman and ask him how he was getting on in the laboratory. He replied, "I shall get an assistant to do that when I get into practice; besides, it is thought very little of in the examination. I want to get on in the surgical work."

The result of such a line of reasoning is that the time spent in the so-called mechanical portion has been wasted, and that when such a student gets into practice he will be for ever the slave to assistants as regards mechanical work. Further, there can be little doubt that a pupil is far better fitted to get on in the surgery when he has been taught the use of his fingers and can handle a file.

After some strictures upon inferior mechanical work which the

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\* This refers, no doubt, to the conditions obtaining previously to the existence of the new mechanical department at Leicester Square.



author had met with in the course of his practice, Mr. Coxon proceeded to say that dentistry has, of late, made great strides, but the mechanical side of our work has nearly stood still, and, I fear will do so as long as our pupils are allowed to go into the work-room and copy what they see being done, and without any one to instruct them as to the character of the face the teeth are to harmonize with, and why a denture must be strengthened at this place and that, and where the chief strain will occur when it is in the mouth. It is on this account that I contend, that when first a pupil enters the work-room everything he does should be carefully overlooked, whether it be taking a casting or running a model. It is at the beginning that the pupil should be placed on the right path as regards mechanics, and then is the time to instil into him, that before he is able to stop teeth he ought to be proficient in the art of making plates.

Mr. Coxon then alluded to the necessity of instructing pupils in backing teeth and model casting, impressing specially the necessity of beginning early. He urged the importance of cleanliness in the workroom. He proceeded to say:—It is always well to have your pupil with you when you take bites and impressions and fit in cases. He will then learn that which cannot be taught with the same nicety in a hospital. And let him understand that anything will not do to take a bite, and that it should give the necessary fulness to the face, and at the same time the true centre of the mouth. To teach a pupil to take impressions and to get him used to handling of composition, a good way is to let him take casts of the front teeth when the jaws are closed, press the tray firmly over the front teeth, and then ask the patient to open the mouth, and you will have an impression that will show the exact position of the bite when closed, and at the same time give a clear and undragged cast. This will make him clearly understand that however regular the teeth may seem to the casual observer, there is always that little irregularity that serves to give the natural expression. These models are also very useful to keep, as you can always say to your pupil, "I want a set of teeth set up similar to this model." This at once gives him a definite notion of what you want him to carry out, and is far better than letting him set up teeth to his own idea. I take one of all my regular patients, and find they greatly assist me, when after a time the patients require artificial teeth, in restoring the natural appearance.

I am of firm opinion that if you take a pupil you ought to get a substantial premium with him. Every workman is worthy of his hire, and if you are not well paid it is impossible to give up the time to teach. It is no use turning a boy loose in a laboratory and allowing him to pick up what he can; but you must teach him day by day till he is a thoroughly competent mechanic. It is not just to take a pupil and then hand him over to the care of assistants to teach.

Gentlemen, I hope in the future to see the examinations in dental mechanics take a more definite form, and that no man who is not a thorough mechanic be allowed to take his diploma. I do not mean a theoretical examination; but one in which he shall sit down and make a denture from start to finish.

If it were possible I should like to see an opportunity given to pupils who so desire it, of passing the examination in mechanical dentistry when they have completed their apprenticeship, and be granted a certificate to that effect.

The PRESIDENT, in opening his discussion, said there could be no doubt that it was most important that the practitioner of dentistry should be a thoroughly trained dental mechanic as well as a surgeon. He was afraid that his experience had been, in regard to getting assistance, that the average dental mechanic of the present day had deteriorated, compared with the average dental mechanic of some time ago. He thought the introduction of vulcanite had led to slipshod work in some directions. A good many dentists were apt to make their dentures by rule of thumb, rather than to study the restoration of the face to what it was before the teeth were removed.

Mr. KENDRICK agreed with Mr. Coxon that if a young man could pass in mechanics directly he arrived in London, or six months after, it would be a great help to him, and leave him the whole of his remaining time at the hospital to devote to subjects which he ought to learn there.

Mr. SMITH TURNER said there was no control over apprentices except in name. The necessity for recognising that more fully and practically and finding a remedy for it had presented itself to the eyes of the authorities, and Mr. Coxon and all who took an interest in the profession would probably be glad to hear that steps had been taken to ascertain whether apprentices had been good, or whether they had been otherwise.

Mr. PEARSALL said he thought the question which Mr. Coxon

had brought before the Association was one the members could not allow to drop from their attention. He thought himself that the better mechanic a pupil was the more likely he was to become a good dentist. He suggested the establishment of a public laboratory and the issue of certificates of efficiency to youths who could pass an examination at a certain time of their pupilage in mechanical dentistry. He also advocated the use of the best appliances in the workroom, and urged that great efforts should be made to bring all mechanical apparatus up to modern date.

Mr. DAVID HEPBURN said he thought that what Mr. Coxon had described applied chiefly to the past, not much to the present; and he hoped very little to the future. There was no doubt that in past times men who had not themselves undergone a systematic training could not recognise the necessity of it, and consequently did not see the necessity of imparting systematic training to their pupils. That, he trusted, would be abolished because the present dental student who intended when he went into practice on his own account to take pupils, would know the importance of imparting systematic teaching to those pupils, and, moreover, would himself have undergone a course of training which would enable him to impart instruction of the proper kind. Men were at the present time feeling the great necessity of organising some system of training in dental mechanics which should be continuous upon what had been done in former times. The College of Surgeons reserved to itself the right to put questions in dental mechanics, and, in consequence of that the teaching bodies were exerting themselves to organise systems of teaching. But he would say of those systems of teaching, as far as he could see, which those bodies were endeavouring to bring about, that they really were not going to take upon themselves the responsibility of giving complete instruction in dental mechanics. This preliminary instruction must be gained elsewhere and they must look to dental practitioners for support in the matter. It would be the duty of practitioners to impart to the pupils under their care not only the instruction in the workroom, but as far as possible, to introduce them into the mysteries of dealing with mechanical appliances in the mouths of patients. It was of the utmost importance that the dental student should attend to his mechanical training, because there was no doubt that there came a time in all dentists' lives when operative dental surgery caused a little strain and a tax, and they would fall back on their mechanical knowledge as a sort

of relief. If dental students wished to acquire a knowledge of dental mechanics they must acquire it in their early life because they would never acquire it later in life. No doubt people would be thinking very much about what was to be done in hospitals with regard to the mechanical training of students; but he thought the teaching was in no way intended to interfere with the teaching that students received at the hands of private practitioners. The student's time at the hospital was well taken up already. He thought any scheme which might be held forth as a means of teaching students *en masse* the art of mechanical dentistry from beginning to end would thoroughly fail. It was teaching that required personal supervision. What was proposed to be done by the body with which he was connected was, that they should supply a certain kind of teaching which could not very well be obtained in the house of a private individual. In the hospital they hoped to be able to impart to the student instruction dealing with dental mechanics, which really dealt with the application of dentures to the mouth and not so much with the actual treatment of cases themselves. As to how long the student should be allowed to remain at the bench, Mr. Hepburn said he thought the period of three years fixed by the College of Surgeons would be long enough to help him to understand the practice and to give him that mechanical aptitude which would make him dexterous in manipulation.

In replying to the discussion, Mr. COXON said there was no system at the present time under which a student was proved to be a mechanic. He hoped there would be a system established which would remedy that. There was no examination in which the examiners put a student to the actual test as regarded work. Mr. Turner spoke of apprenticeships, and said that sooner or later they would have to be abolished.

Mr. SMITH TURNER said that what he did say was that the examiners had trusted to the existence of apprenticeships, and had failed to institute an examination, having trusted to the existence of the apprenticeship as a sufficient guarantee of a man's knowledge; but the examiners had now found that in doing so they were wrong, and that the necessity of examinations had been forced upon them because there was no effort to enforce a man to keep to the conditions of his indentures.

Mr. COXON: In that case, Mr. Turner and I are perfectly at one. Proceeding, Mr. Coxon asked why, if a man could not

pass an examination in practical mechanics, the authorities should give him a diploma at all? If he was no mechanic at all he was a fraud. The same pains ought to be taken to see that a candidate for a diploma was an expert mechanical dentist, as that he was well informed in surgical knowledge, because he considered that one accomplishment was as valuable as the other. He urged in conclusion that candidates should be given half-a-day's practical work to do before they were allowed to pass. When such a system was adopted, and in working order, they would find they had a better status of men than at present, and men with more ability. It was certainly a wrong policy to take it for granted that pupils had sufficient mechanical knowledge.

The members at this stage adjourned for luncheon, and the interval between the luncheon and the resumption of business was spent in visiting the Devon and Exeter Horticultural Society's Show on Northernhay, to which the members of the Association had been kindly invited by the Society.

Mr. T. G. READ opened the afternoon proceedings by reading a paper on "Some Porcelain and Gold Crowns for Bicuspid and Molars."

Mr. H. W. Mayne was unable to be present to read the paper he had promised on "A Model with Drainage-tube attached to Antrum."

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#### DEMONSTRATIONS.

##### A New Obturator.

By DR. BRANDT, Berlin.

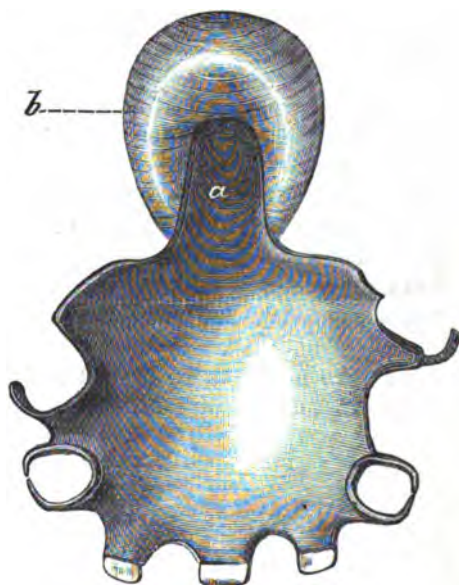
Mr. MORTON SMALE read for Dr. Brandt, of Berlin, the following Communication, and explained the mechanism of the obturators. He apologised for Dr. Brandt's absence and for the shortcomings of the description, and explained that Dr. Brandt knew very little English. The following is a translation of Dr. Brandt's explanation of the plates:—

A.—Most obturators have the disadvantage that they interfere with the action of the muscles of the pharynx and of the soft palate. Whether obturators are made out of hard or soft rubber, we have the same disadvantage.

B.—To take an impression for ordinary obturators is generally very difficult for the operator and disagreeable for the patient.

C.—The expiration and inspiration is with all old methods inefficient.

D.—The old styles of obturators often cause the soft parts to become inflamed and induce catarrh of the mouth and nose. To avoid these disadvantages I have constructed two kinds of obturators.



I.—PALATE OBTURATOR.

Useful for non-operated cleft palate or acquired deformity.

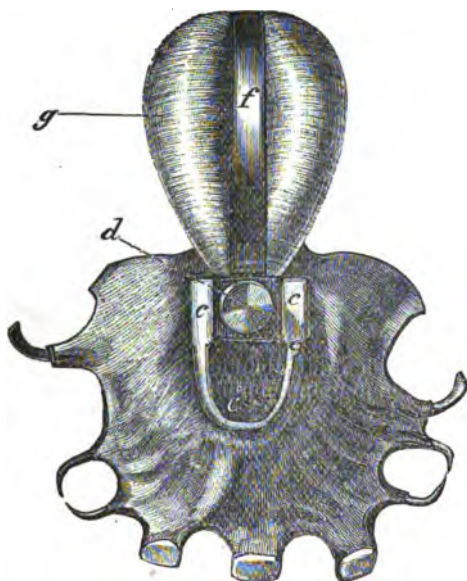
*a*—A plate behind the palate plate, and directed upwards, holding the bag in the desired position.

*b*—The bag filled with air as seen *in situ* from the mouth.

I.—To be used for cleft palate or defects caused by syphilis or injury, where the soft or hard palate or both are fissured.

II.—For the cases where the soft and hard palate are joined through the operation of staphylorrhaphy. Both obturators allow in a sufficient degree the action of the muscles. The im-

pression for the new obturators is taken in the same way as an impression of a simple artificial denture. The inspiration and expiration is easy for the patient, and these obturators never inflame the soft parts of the mouth.



#### I.—PALATE OBTURATOR.

Useful for non-operated cleft palate or acquired deformity.

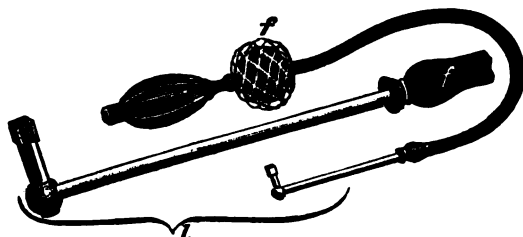
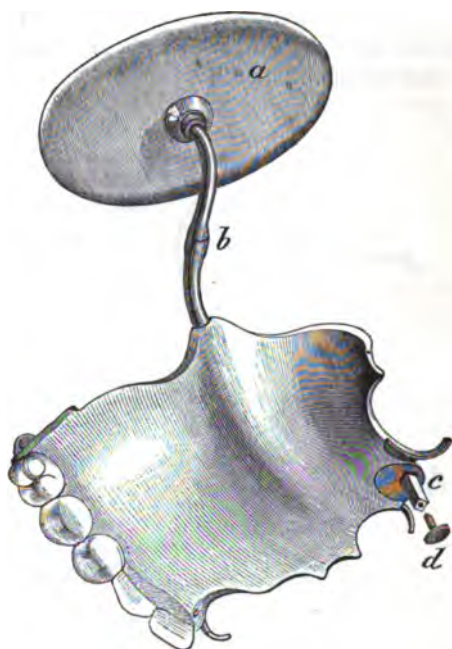
*c*—On the back side of the plate is a delicate little box made of the same material as the plate itself. The size depends on the defect.

*d*—Tourniquet with screws for the fixing of the bag, which has already been filled with air.

*f*—Fastened from behind and running under the screw apparatus is a light flexible iron band which presses down the bag and thus makes it possible to breathe.

*g*—The filled bag as it lies against the roof of the mouth (? hard palate).

I have made both kinds of obturators for many patients with the best success. During the short time that has elapsed since I published the methods, many dentists in Germany have recorded good successes also.



## II.—JAW OBTURATOR.

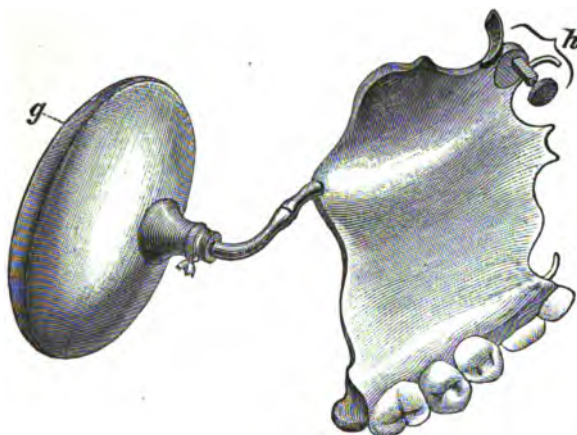
Applicable to already carried out staphylorrhaphy.

*a*—An empty bag (made of india-rubber or isinglass) fastened by a thread to the end of the canula. The size must correspond to the distance of the velum (? soft palate) from the roof of the mouth (? hard palate)

*b*—Screw junction connecting the plate with the hinder portion (of the bag). This can be easily screwed off for renewal of the bag or necessary repairs of the dental plate.

*c*—The front end of the canula running out into a four-cornered tap, which is placed in any tooth-hole, and is hidden by the corresponding half tooth.





## II.—JAW OBTURATOR.

Applicable to already carried out staphylorrhaphy.

*d*—Screws meant for stopping up the opening of the tap to prevent the penetration of eatables and fluids, and at the same time to serve as an antagonist during mastication for the tooth lying opposite to it in the under jaw.

*l*—A hollow spanner which fits on the tap “*c*,” and opens and closes it.

*f*—A bag with the spanner in connection, and blowing the air through the spanner into the canula through the open tap.

*g* and *h*—A bladder is filled, tap is closed and furnished with screws.

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## Southern Counties Branch.

THE last meeting of the above Branch was held on Saturday, October 11th, in the Brighton and Hove General Dispensary, Queen's Road, Brighton. Present :—Messrs. F. J. Vanderpant, President (Kingston-on-Thames), E. Lloyd Williams, W. H. Coffin, W. H. Woodruff and J. Walker (London), J. H. Redman, J. Dennant, Walter Harrison, J. E. Welch, S. Johnson, C. B. Stoner, D. E. Caush, J. T. Whatford, E. L. Norris, F. V. Richardson, T. H. Elliott, and S. H. Olnor (Brighton), G. Henry and Leslie Maxwell (Hastings), F. Ellwood and Alverstone Gabell (Redhill), S. Hoole and Morgan Hughes (Croydon), J. H. Reinhardt (Brixton), F. Petty (Reading), F. J. Dumayne (Lee), G. O. Richards (Richmond), and others.

The Council met at two o'clock, and elected Mr. F. J. Dumayne, L.D.S.I., of Lee, a member of the Association and Branch; and Messrs. E. Lloyd Williams and Sydney Longhurst members of the Branch.

For the first time in the history of the Branch demonstrations were given at the afternoon meeting, and an unambitious programme was successfully carried out, the special thanks of the Branch being due to the demonstrators who so kindly gave their services, and to Mr. Walter Harrison for seeing to the necessary arrangements.

The demonstrations consisted of gold filling by the combined non-cohesive and cohesive method, by Mr. J. H. Redman ; gold filling, using the electric mallet, by Mr. W. H. Woodruff ; the treatment of irregularities of the teeth, as demonstrated by models and appliances, by Mr. Walter Coffin.

Subsequent to the demonstrations, many members dined together at Booth's Restaurant, and the sum of £2 2s. 6d. was collected for the Benevolent Fund of the Association.

At 6.45 members met together again, and, in accordance with the notice issued, the special general meeting to receive the Treasurer's balance sheet and report was first held. The balance to carry forward was only 14s. 1d., on account principally of the expenses being larger than usual owing to the fact that this year the accounts were all settled prior to the annual meeting, and included some incurred in the previous year, and to the unusual expenses involved in the hire of the Assembly Rooms at Surbiton for the annual meeting.

The report and balance-sheet was adopted by the meeting, on the motion of Mr. REDMAN, seconded by Mr. STEPHEN HOOLE.

The ordinary meeting was then held.

The HON. SECRETARY read the minutes of the last meeting, which were duly confirmed.

The PRESIDENT then called upon Mr. D. E. CAUSH for his paper on "Some Causes of Failure in Root Canal Fillings," which will appear in our next issue.\* The paper was profusely illustrated by beautifully-prepared sections, which were thrown upon a screen by means of the oxy-hydrogen lantern.

A good discussion ensued on this valuable paper, in which the following gentlemen took part :—Messrs. Henry, Dennant, Welch, E. Lloyd Williams and F. Bell. A hope was expressed that members would have the opportunity of studying some of Mr. Caush's sections at their leisure, when printed in the Journal of the Association.

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### Midland Counties Branch.

AN informal meeting of the members of this Branch was held in the Albert Hall, Harrogate, on Saturday, October 25th.

Present : G. Brunton, Esq., President (Leeds); Alex. Fothergill, President elect (Darlington); Messrs. T. E. Barnby, F. E. Garner, A. Howarth, E. J. Ladmore, A. A. Matthews (Bradford); W. Taylor

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\* The paper would have appeared this month, but an unavoidable delay in connection with the illustrations has postponed it till December.

(Batley); M. Johnson (Chester); J. A. Fothergill (Darlington); Arthur Cocker, A. B. Wolfenden (Halifax); Charles Rippon (Huddersfield); Alfred Abel, Adrian Parsons (Harrogate); J. C. Stores, W. M. Howkins (Hull); W. Armin, J. C. Birch, L. E. Browne, T. Carter, J. E. Greaves, W. H. Nichol, J. M. Nichol (Leeds); R. Edwards, W. J. Pidgeon (Liverpool); L. Matheson (London); G. G. Campion, Henry Planck, G. O. Whittaker (Manchester); Norman Washbourn (Ripon); I. Renshaw (Rochdale); W. H. Lodge (Rotherham); Joseph Harrison (Sheffield); J. W. Dent (Stockton); T. A. Tait (Tenterden); T. E. King, M. Glaisby, A. G. Rayner, G. H. Osborn (York).

The members took tea together, and before rising the box of the Benevolent Fund was passed round and the sum of £4 was realised.

On re-assembling the President, G. Brunton, Esq., cordially welcomed the members to Harrogate, and expressed his gratification at seeing so many present, as it indicated the increasing interest which is being taken in the work of the British Dental Association and its Branches.

A paper was then read on "Pulpless Teeth," by E. J. Ladmore, L.D.S., which appears as an Original Communication.

A most interesting and instructive discussion ensued, Mr. Ladmore having suitably replied, the evening was then spent in examining special appliances and instruments.

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### West of Scotland Branch.

A MEETING of the West of Scotland Branch will be held on Thursday, November 27th, at eight p.m., in the Library of the Faculty of Physicians and Surgeons, 242, St. Vincent Street, Glasgow. The meeting will be devoted to Casual Communications introduced by Mr. J. Moore Lipscomb, Mr. J. A. Biggs, Mr. W. Gray, and other members.

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## ORIGINAL COMMUNICATIONS.

### An Easy Method of Porcelain Filling.\*

BY WILLIAM DALL, L.D.S.Glas., Glasgow.

THERE has been considerable dissatisfaction in all countries for years back with the fillings that have been in general use for frontal cavities. In the search after something that would take the place of gold, which is both glaring and inartistic because so

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\* Read before the International Medical Congress, Berlin, 1890.

unlike tooth substance, and of amalgam, as it becomes black, stains the teeth, and renders them very unsightly, and of cement because of its non-durability, I commenced practising porcelain filling.

Cavities purely labial and coronal had hitherto been filled with porcelain by many practitioners throughout the world, but a wider field lay open in compound cavities, including the labial surface. The results of my early efforts in this direction I brought before a branch of the British Dental Association in February, 1889, and as I have practised it constantly since then, I can now speak more confidently of the beauty and permanency of porcelain filling.

For the *modus operandi* I will refer to this previous paper, from which I will give an extract with fuller explanations based on a larger experience. Before doing so, however, I will show you a few natural teeth filled with porcelain in various ways. These teeth being natural but lifeless, do not give you a perfect idea of the best results to be obtained. In the same manner as we match natural with porcelain teeth, so can we match exactly in shade the tooth to be filled with a porcelain stopper.

On two of my specimens, Nos. 12 and 13, I would have you notice the white and yellow spots, such as sometimes occur on natural teeth, which are burned into the cavity stoppers. Amongst the specimens I shew two teeth, each tipped or pointed with one piece of porcelain, but such as these I will leave to the discretion of the operator, as they may be done in various ways with metal for backing or otherwise. You may also notice a few stopped with gum-coloured porcelain. These cavities are filled with stoppers made from American gum teeth.

I will now treat of simple cavities, such as exist in the labial surfaces of incisors. A cavity of this kind is very easily dealt with. First shape it so as to save as much tooth substance as possible, finishing by bearing lightly on the walls or edges with a very fine fissure bur, as a rough one is apt to chip the edge of the cavity; then select a porcelain stopper near to the size and shade required; next grind it to fit, and then insert with any white filling the operator thinks best. In my own practice I use and would recommend Ash's improved rock cement, because the powder is very fine and can be mixed exceedingly thin; moreover, as it does not set too rapidly, I am not unduly hurried while setting the stopper. After the cement has sufficiently hardened,

Some of the cavity stoppers and specimen  
teeth as shown at Berlin. Actual size.

Showing method of making  
from diatase teeth.



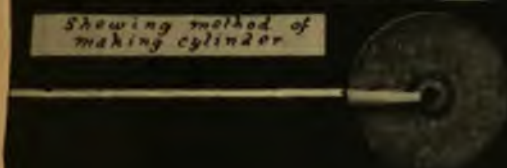
Tooth repaired with  
porcelain & amalgam  
showing white spot  
burned in.

Showing side, front,  
and back of stoppers.



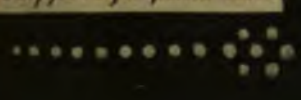
Partial porcelain  
tip with lingual  
wall of amalgam.

Showing method of  
making cylinder



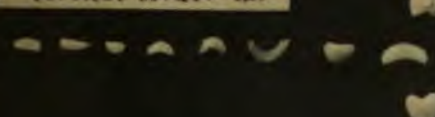
Showing labial  
cavity finished, gum  
has assumed  
its normal position

Stoppers for pitted teeth.



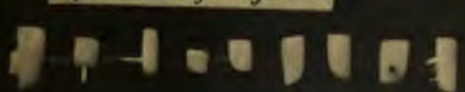
Labial cavity  
finished before the  
cavity finished, gum  
has assumed  
its normal position

Various shapes for  
cervical border etc.



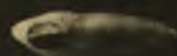
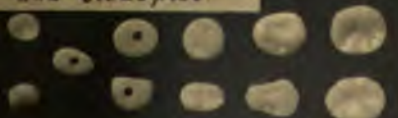
Cavity ready for  
stopper, then pushed  
from cervical border  
& gold line inserted

Stoppers with pins  
for cutting edge.

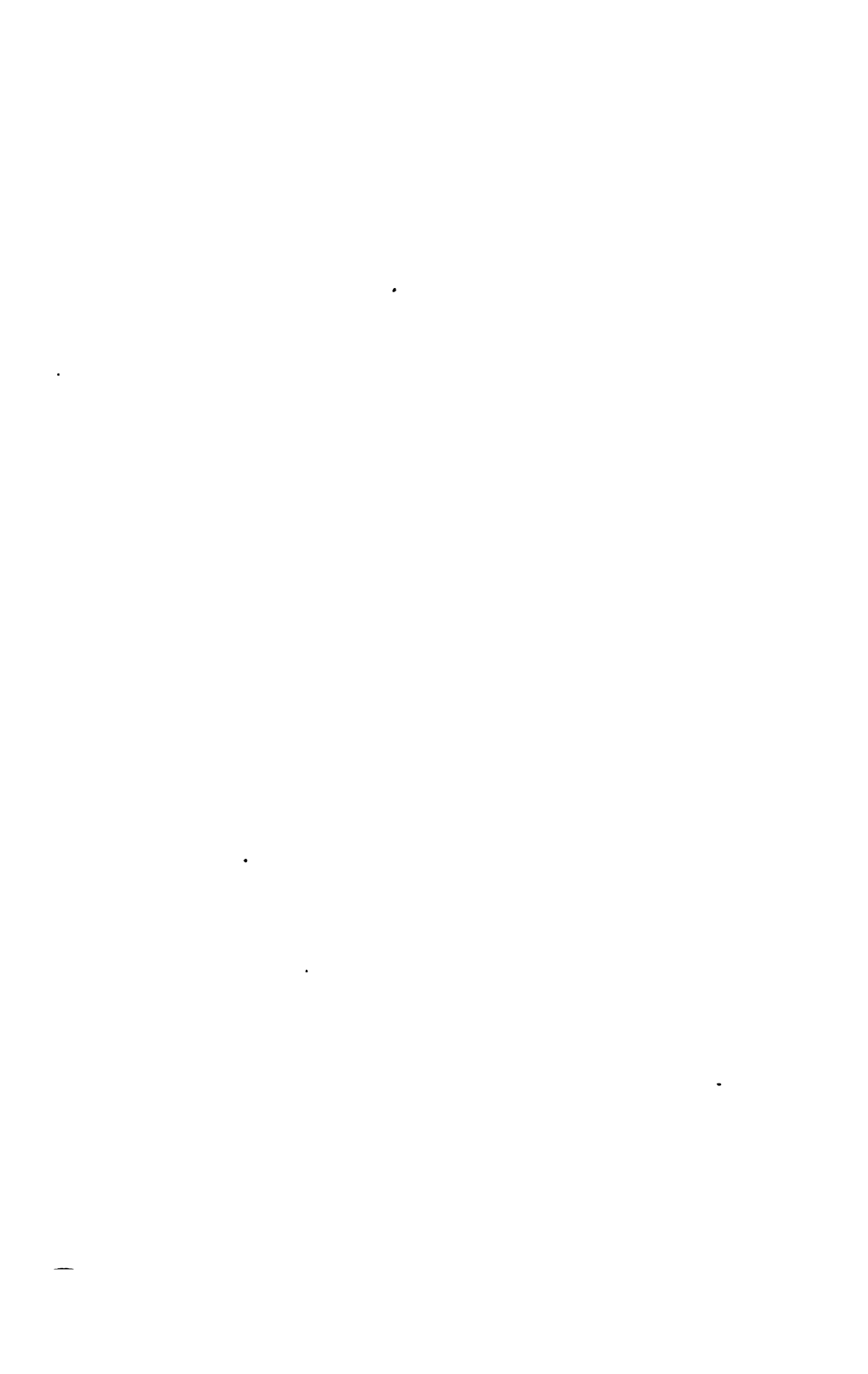


Proximal cavity  
including labial  
and lingual walls  
filled with gold  
and porcelain.

Stoppers for molars  
and bicuspids.



Cavity half  
filled with gold  
and ready for  
porcelain.



grind it flush with the body of the tooth, by using a fine corundum wheel revolved in the dental engine, or one of Büttner's diamond reamers, which I find excellent for this purpose, and which I will again refer to. Polish with water of Ayr-stone, wood and moose-hide points, with a little pumice, or to get a very fine polish a little putty powder may be used.

The treatment of a compound cavity, including proximate, labial and lingual walls, is somewhat different, but still extremely easy, as it may be reduced to a simple cavity by building up the lingual and half of the proximate walls with gold or amalgam, thus leaving a proximate labial cavity ready for the insertion of porcelain. No. 15 in case No. 2 shows a cavity half filled with gold ready for stopper.

To be more explicit, however, before building up your gold or amalgam, after having prepared your cavity as in the simple, place a little cotton wool to half fill the cavity; next select your stopper, and if necessary grind as near as possible to fit the labial wall or edge, then withdraw this cotton wool, and fill with gold or amalgam. If one wishes to use amalgam it is better to line the walls with a very thin coating of white filling before its introduction. After having filled the cavity sufficiently with gold or amalgam, again try the porcelain stopper, fitting it more accurately before fixing with a white filling. In the case of amalgam allow a day or so to elapse before finishing, but if gold be used for the lingual wall, the operation may be completed at one sitting.

I will now touch upon one of the most difficult cavities we have to deal with, namely, a compound when it includes the cutting edge. After having prepared your cavity make a retaining point at the cervical border, or there fix a gold anchor screw next to the lingual wall, and near to the cutting edge, so as to form a support for the gold wall or backing. Pack your gold in the ordinary manner, leaving a cavity for your porcelain stopper, which is grooved on the outer edge, so that the gold may be burnished into it, after fixing with cement, or one can drill a small hole through the gold backing for the insertion of a stopper with a pin. If amalgam be used, it is better, as I said before, to line the cavity and also to cover the gold screws with a thin coating of cement, so that the tooth may retain its colour and the screws their strength.

A few words on the making of some porcelain stoppers may now be interesting to you.

For compound cavities take a diatoric lower or upper front tooth, and after cutting off the back with a diamond disc, or having it ground in the workroom, grind to a shape nearly resembling the section of a half round file. Hold this piece of porcelain in the left hand between the finger and thumb, and with a rapidly revolving disc in the handpiece cut off the stoppers, each of which must be grooved before separating.

Round stoppers may be made by cutting a tooth in sections lengthwise, and then fastening one of these into a trephine or portepolisher with a piece of shellac. It is now rapidly revolved by the dental engine, resting it lightly on a large mounted diamond disc. By this method you can make them perfectly true, and of any size. The smallest which I make and use for pitted teeth is less than one-sixteenth of an inch in diameter, some of which you can see in case No. 2. Those required for compound cavities with cutting edge are made from flat teeth with pins, the pin or pins being retained in the stopper. Of course there are many other useful shapes, which I have not here time to describe, such as those required for labial-cervical cavities, &c., but with a proper equipment of instruments and Ash's teeth at command—which I always use on account of their density and fineness of grain—one has an unlimited power in producing the needed stopper, it matters not what shape or colour. Another qualification of Ash's teeth is, that they admit of a most beautiful polish with little labour.

The instruments used by me for making those stoppers are the S. S. White diamond discs and points, which I consider invaluable, as they do the work so beautifully, and are not at all expensive, considering the amount they perform. You will notice that I have some very small discs. These were made from diamond points and mounted by myself. Some grind to the right, some to the left, and some on the edge only. I use these principally for finishing proximate labial fillings. The S. S. White Company were good enough to make me a few which are safe sided. If these are not thin enough they can easily be reduced. I was glad to notice in the June *Cosmos* that they are now making those small discs, size three-sixteenths of an inch, mounted and ready for the operator. The two files in the case are made from the safe-sided S. S. White discs, and are used for trimming proximate porcelain fillings. The Büttner reamers I use a good deal for finishing labial surfaces. They are also excellent, for the dust they are charged with seems to be very fine.



Before finishing I would like to make a few general remarks on my experience of porcelain filling. Frail teeth which will not stand the shock of gold can often be filled with porcelain and amalgam with much less trouble and results more satisfactory to patient and operator. This I think of great importance in conservative dentistry. It can also be done with much less fatigue to the patient, for the preparation of the cavity and the filling may be done in easy stages.

In order to save time and trouble, it is desirable to keep a good stock of cavity stoppers of various shades, shapes and sizes. By doing this I often never require to grind or touch the porcelain stopper, and in this case when it is combined with amalgam, I can finish the operation in the short time of half-an-hour. When the stopper requires trimming, however, I generally manage an ordinary filling in forty-five minutes. The filling can be finished next day in about fifteen minutes.

In frontal cavities it is altogether unnecessary to take impressions, but sometimes in molars or bicuspid, when the cavity is irregular and not easily got at, I take an impression with pink modelling wax rolled in the form of a pencil. The end of this wax I heat gently over a spirit flame, and knead it between the index finger and thumb before introducing it into the cavity. After taking the impression I pour a little plaster and push the imprint into it. When the plaster is sufficiently hard I remove the wax by means of hot water. Any assistant can now fit a stopper to the model out of Ash's dove-tail bicuspid or molars.

Some dentists have said that porcelain filling will have its day, and that a short one, and that only in exceptional cases can porcelain be used, but my experience refutes these assertions completely. The longer I practise porcelain filling the more I see how it pleases the general public, as patients have come and had gold fillings replaced by porcelain. As for it being used only in exceptional cases, with me it is the exception when it cannot be used.

Some dentists prefer to mould and bake their stoppers in glass or porcelain, but this I think quite unnecessary, when we have porcelain teeth of any desired shade ready to be cut up. I hope the day, however, is not far off when the manufacturers will supply the profession with porcelain stoppers in as great variety as they do in teeth. If porcelain filling were demonstrated and taught in our dental colleges, the students, through practice, would become as expert in this branch of dental science as in gold filling.

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### The Treatment of Pulpless Teeth.

By E. J. LADMORE, L.D.S.

THE subject chosen, "The Treatment of Pulpless Teeth," is one on which so much has been written and on which such a great amount of ingenuity has already been expended that it seems extremely difficult, nay, almost impossible to say anything new about it or to produce matter which shall be a substantial addition to our literature, and I may say at the outset that I already repent having set myself this task, but relying upon your forbearance I promise not to detain you very long.

I have noticed that most writers commence in the middle of this subject by assuming that the teeth are already laid open and that we have at once ready access to all the pulp canals under treatment. If this happy state of things really existed and cavities only occurred in positions best adapted for cleansing the pulp canals our work would be simplicity itself, but what do we find in practice? A patient may come with exposed pulp in a distal cavity in one of the molars, upper or lower, or possibly the pulp may be already dead and setting up periosteal trouble. Now, if such teeth are to be filled at all it will, I think, be generally conceded that the only method recognised to-day is to cleanse and solidly fill the root canals before attending to the cavity of decay, and I know of no better method for doing this expeditiously than by means of drills carried in the right angle attachment of the engine; but to use these drills it is necessary that the tooth be opened so that they will pass along the canals in as nearly a straight line as possible, because, although the drills are called flexible, it will be found in practice that very little deviation from a straight line will result in a broken one, with the point of it buried deeply in the root in such a manner as to defy any attempts to remove it. The drills will readily remove the devitalised or decomposed pulp, so that the use of barbs is almost unnecessary, and more than that, by enlarging the canals of putrid teeth the drills will cut away much of the infected area, though they will not often be found to penetrate to the end of the root, especially in the case of badly bent roots, which would be quite impossible. When the canals are exposed to view in the manner described, the greater part of our work is accomplished, as what remains in the subsequent treatment of the tooth in question is very simple indeed, and it is upon this particular aspect of our

work, obtaining ready access to the pulp canals, that I propose to address you to-night, because the subsequent treatment has already been brought before you. I wish first to say that where teeth are so extremely sensitive to the touch that they will not bear the slightest jar in drilling, I have found it a great assistance to first inject a little under half a grain of cocaine in the same manner as for extraction, when it will be found that the sensitiveness of the socket is quite gone and the tooth can be burred and cut as desired.

In the majority of teeth the roots have all a tendency to bend backward, that is towards the distal side, hence any opening designed to reach the pulp canals should be made a little to the mesial side of a point representing the centre of the crown; therefore, a mesial cavity will not encroach so far into the crown as one occurring on the distal surface. This applies in a marked degree to the molars and bicuspid of both jaws. For instance, cavities are very commonly met with invading the pulp of the sixth year molars on their mesial aspect, and after burring to the pulp chambers it will be found that the canals can be easily reached without cutting very far into the crown, while if the cavity occurs on the opposite or distal side it will be necessary to make a considerable opening upon the masticating surface, owing to the backward tendency of the roots already alluded to, which causes their general axial line to point in a mesial direction to the masticating surface.

Now one great objection to this plan of cutting so far into the crown, is that the removal of so much sound tooth substance must necessarily weaken the whole structure to such an extent that there is danger of either the buccal or lingual wall splitting off in ordinary mastication.

This defect has led me to adopt the plan of reaching the pulp chamber by drilling a hole, which I will call a counter opening, just where we can best get directly into the canals, and which in the case of the sixth year upper molars, is right in the deepest part of the anterior sulcus of the masticating surface. This counter opening need not be more than one-eighth of an inch in diameter, and though a distinct opening in the surface of the tooth, it will really join the cavity of decay from the inside, and so form one continuous filling. Having made this opening, the position of the canals can be easily determined by the aid of the mirror, using the drill in the right angle attachment, or the drill

can be made to enter them by the sense of touch only, more especially if the floor of the pulp chamber has not been cut by the burr, as its natural shape will guide the drill into the canals if we bear in mind their relative positions, always remembering that the palatine canal being the largest and longest, is the first to find, then the anterior buccal, and finally the posterior buccal, which is generally found midway between them in a more or less curved line, and sometimes in the same straight line, the canal taking a backward direction. It will also be noticed that while the drill will seldom penetrate more than a quarter of an inch in the anterior buccal, probably due to its curved shape, we can get much further up the posterior, as like the palatine, it is a fairly straight root.

The counter opening can also be made where suitable in lower molars, and much of what has been said in connection with the upper molars will apply to them, except as regards the variation in shape and position of their roots, which in section are somewhat like a figure of eight, pointing to their having two canals in each root which is not always the case; and although two canals in the anterior root are constant, there will in most cases be only one practicable canal in the posterior, which is much longer and larger than the two canals found in the curved front root.

Of the bicuspid I have little to remark except that in the upper bicuspid the first are in many cases bifurcated, and consequently two canals may be expected, but in the second there will only be one canal to open. In the bicuspid of the lower jaw single canals occur which are much longer and larger than those in the upper, due to their roundish straight roots.

The superior and inferior canines have their pulps invaded in most cases by a cavity upon their distal surface, in which case the opening to the canal can be made by cutting through the lingual slope with a fissure bur carrying a groove in the direction of the point of the tooth, but it will be found that this plan weakens the tooth to such an extent that it will be necessary, or at least advisable, to reduce its width by cutting away the distal side to prevent the labial wall from splitting off. Even then a drill will not pass directly up the canal without bending and consequent risk of breaking, because it must be remembered that in a longitudinal section of a canine it will be evident that if the line made by the pulp canal is produced, it must emerge exactly at the point of the tooth. Instead, therefore, of cutting into the tooth

as described, I would again make a counter opening, as in the case of the molars, and this may seem somewhat difficult on account of the enamel being so dense at this point. However, if a flat is ground on the extreme point of the tooth, or if it is already worn, a spot of dentine will appear, which gives the exact place to drill in, and if the hole is carried up in line with the axis of the root, it cannot fail to go straight into the canal. This plan will leave a much stronger tooth and gives a better anchorage for the filling.

In drilling up as described, it is advisable to commence with a small, sharp, spear-pointed drill, afterwards enlarging the hole with a fissure bur until it is large enough for the purpose intended, being careful to run the engine slowly to avoid overheating the drill, as the tooth is easily cracked from that cause.

The incisor teeth have the same peculiarity as the canines, in that the best position in which to get directly into the canal is by making a hole directly through the centre of the cutting edge, but as the teeth are so thin at this point, the plan of making a counter opening is quite inadmissible with them, and it only remains to cut a groove from the edge of the cavity up the inner slope until it is practicable, with a little care, to pass a drill up; but even this method will not often do for the laterals, and my only way of treating these teeth is to abandon drills, and resort to barbs after cutting away the side of the tooth without disfiguring it more than necessary, until we can effect an entrance.

To sum up, I maintain that the use of drills will result in a great saving of time, and will more effectually cleanse the canals than any other method with which I am familiar. In the matter of putrid teeth, we are enabled to cut away much of the infected area, and further, the consequent enlargement of the canals will very much simplify their after treatment and filling.

The plan of making counter openings is original so far as I am concerned, as I have not seen it recorded anywhere, and as I have been working in that way for three or four years, I feel confident to say that in my hands it leaves the tooth much stronger, and the filling is better anchored than in the alternative plan of extending the cavity across the crown.

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## LEGAL INTELLIGENCE.

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Contravention of the Dentists Act.

AT the instance of William Broomfield Paterson, honorary secretary of the British Dental Association, a complaint was presented in the Edinburgh Sheriff Court recently against Dr. Squire Winfield Allen, 40, Queen Street, who was alleged to have contravened the Dentists Act, 1878, by using on the brass plate on his door the words "Dr. Squire Winfield Allen, graduate of New York Dental College, formerly with Dr. Hogue," and by being entered in the Post Office Directory as an American dentist and a doctor of dental surgery. A discussion on the relevancy of the complaint took place before Sheriff Rutherford about a fortnight ago, when Mr. Wallace, advocate, instructed by Mr. Lindsay Mackersy, W.S., appeared for the complainer, and Mr. C. S. Dickson, advocate, instructed by Mr. A. W. Gordon, solicitor, for the respondent. His lordship, who then reserved judgment, held, on the case being again called yesterday, that the complaint was relevant. Mr. Wallace, however, was allowed to make an amendment on it, the result of which would be, the Sheriff had remarked, to make it clearer. The respondent then pleaded not guilty, and evidence was led. Mr. Gordon admitted that the plate was put on the door with the knowledge of the respondent. After hearing Mr. Wallace and Mr. Gordon on the evidence, the Sheriff said it had been elicited that American dentistry was very well known in this country, and that Americans had made great progress in scientific dentistry and professed very great qualifications, and, therefore, he could not be under any doubt that when a person designed himself on his door-plate or anywhere else as a graduate of New York Dental College, and also when he said that he was formerly with Dr. Hogue, a well-known dentist in Edinburgh, he was claiming that he was qualified as being well skilled in the art of dentistry. His lordship had no hesitation in holding the first charge proven. As to the second charge, he could not doubt that the respondent's American qualifications were set forth in the Directory on his instruction or with his knowledge. The only American qualifications recognised by the Act of 1878 were those of Harvard and Michigan Universities. At the same time, it was impossible not to be aware that a doctor of dental surgery of New York had a high qualification.

While his lordship found both charges proven, he had to keep in mind that the respondent seemed for a considerable number of years to have had a partner who was a registered practitioner under the statute ; and as long as he had that partner the Dental Association could not get at him to prosecute him. That partner left him at Whitsunday last, and it did not seem that since Whitsunday any intimation was given to the respondent that a complaint would be brought against him. It would have been well if the complainer had sent him information that he would be prosecuted if he did not either qualify in the manner required by the Act, or get a qualified partner. The first intimation he got, however, was the complaint, which was suggested to be brought in the public interest. If they had found an ignorant man setting himself up to be a specially qualified dentist, there might be some ground for that observation ; but it seemed that the respondent had certainly very special qualifications for dentistry, and his lordship did not see that the public required in any way to be protected against him. The complaint had evidently been brought because those gentlemen who were registered practitioners considered that the respondent had infringed their monopoly. In the circumstances, the Sheriff inflicted a nominal fine of ten shillings. Mr. Wallace did not press for expenses.

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### Dispute about a Set of False Teeth.

At the Liverpool County Court, Oct. 20th, before his Honour Judge Collier, Mr. Henry Stewart, dental surgeon, Rodney Street, sued Miss Ellen Lowe, of Sefton Street, Southport, to recover the sum of £18 16s for professional services, and a set of teeth supplied. It appeared that in November last Miss Lowe had fourteen teeth extracted, for which Mr. Stewart charged a fee of £2 2s. In January following he fitted her with a set of false teeth in gold, for which his charge was £12 12s. Miss Lowe retained possession of them for six weeks, and then complained that they did not fit properly, and that she had had an illness in consequence. Mr. Stewart, who stated that he had explained that some readjustment might be necessary through the shrinking of the gums, waited on Miss Lowe at Southport, and offered to supply a temporary vulcanite set until the original set should be wearable. After some delay this offer was accepted, and the

defendant paid the cost of the vulcanite set into court. The question for the court to decide was whether the plaintiff had fulfilled his contract with regard to the first set.

Evidence in support of his claim was given by Messrs. Raymond and Alexander, surgeon dentists. The case for the defendant was that the original set did not fit at all, and that she had suffered a severe illness through attempting to wear them.

His Honour held that the plaintiff had fulfilled his contract in regard to the first set, and gave judgment for the plaintiff with costs.

Mr. Horridge (instructed by Mr. Pride) was for the plaintiff, and Mr. Rudd for the defendant.

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### Fees for Sunday Work.

YESTERDAY, in the Westminster County Court, his Honour Judge Bayley gave judgment in an action in which a dentist sought to recover fees for attending a Mr. Cohen. In the course of the case it was stated that a good deal of the work was done on a Sunday, and the defendant contended that that brought the plaintiff within the Sunday Observance Act, and therefore the claim could not be sustained. Mr. Raymond who appeared for the plaintiff, argued that it had been held by the High Court that a farmer was not within the Act. His Honour said the defence was a shabby one, and he was of opinion that a dentist did not come within the Act. The verdict would be for the plaintiff for the amount claimed with costs.

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## HOSPITAL REPORTS AND CASES IN PRACTICE.

### Case of Irregular Eruption of Canine Teeth.

By A. ALEX. MATTHEWS, L.D.S.Eng., Bradford.

AN interesting case of irregular eruption of both upper canine teeth came under my notice at the Bradford Infirmary in a boy aged thirteen years, who had a perforation of about the size of a shilling piece in the palate of syphilitic origin.

In the upper maxilla he had his four permanent molars and incisors, and the first bicuspid in position, but on the right side



the temporary canine was present and on the left a rather small space between the lateral incisor and first bicuspid.

On examining the palate half the crown of a well formed canine was visible, making its way through the perforation slightly inclined to the right side ; this was extracted and in about a week's time another tooth was observed coming down very nearly in the same position as that held by the recently extracted tooth, but with a tendency to the left side of the opening ; this also was extracted after a few weeks, and was evidently the left upper canine.

The reason for the misdirection of these teeth would appear to be the obstructions in the way of their normal course, and the loose bone of the palate offering but little resistance they became diverted to the median line.

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### **The New Dental Appliance Department of the Dental Hospital of London.**

WE are glad to report that the new Dental Appliance Department of the Dental Hospital of London is now in full working order and promises to prove a great boon not only to the necessitous poor but also to the students of the hospital, who will now have every facility accorded to them of acquiring proficiency in the mechanical branch of their studies. The teaching given in the department is in no way intended to interfere with or take the place of that which should be acquired during the apprenticeship of the student ; but hitherto it has not unfrequently happened that the student even after taking his qualification from any of the licensing bodies has practically had no experience in taking impressions or in fitting artificial appliances into the mouth. According to the present arrangement the student will now have an opportunity not only of acquiring these essential points, but also of perfecting himself in the actual construction of dental obturators and oral splints in a laboratory fitted with all the most recent and approved appliances, and under direct supervision. Those who may be acquainted with the hospital will be interested to see the transformation which has taken place in the basement of the old building. Rooms which formerly were used only for storing lumber have by judicious alterations of an elaborate nature been converted into cheery and commodious work-rooms. The first fitted with sixteen benches, lockers for tools,

superintendent's desk, vice bench, lathes, anvil, &c., is reserved for the cleaner portions of the work.

The second contains plaster, sand and packing benches, furnaces, apparatus for heating models, ovens for flasks, presses, soldering appliances for blast and mouth blow pipes and other requisites. The third is devoted to the vulcanizers, sinks, hot water apparatus, polishing lathes, &c. Altogether the arrangements are workmanlike and convenient, and the electric light which is liberally supplied renders the department available for use even on the darkest days.

The benefit to the large class of deserving poor who are quite unable to obtain such assistance by the simple process of paying a competent professional adviser will be quite obvious at a glance. The benefit to the student that will accrue from enjoying opportunities of conducting cases for himself under supervision, taking models, trying in, and adjusting dentures and making practical acquaintance with the hundred and one difficulties and disappointments that arise in connection with the finishing of mechanical work in the surgery, will be simply incalculable. The varied and extensive field of observation afforded by a hospital must of necessity offer many more opportunities for learning to those who wish to learn than the largest private practice could do, and added to this the student of the future will enjoy the privilege of working under a variety of masters and gleanings all sorts of valuable knowledge from their different methods of treatment. All these subjects will now form part of the examination for the English diploma, and thus almost the only reproach that could be levelled at that examination is in a fair way to be removed.

A select committee will meet every week to investigate with the most rigid care the *bonâ fides* of cases presented for relief, and neither the profession nor the public need fear that unworthy objects of charity will be admitted as recipients of the relief offered by the institution.

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WE are pleased to notice in the current number of *Birmingham Faces and Places*, the portrait and short biography of Mr. Charles Sims, who for many years has occupied a prominent position in our profession in the Midlands. The portrait is an excellent likeness.

## REPORTS OF SOCIETIES AND OTHER MEETINGS.

### The Odontological Society of Great Britain.

THE ordinary monthly meeting was held at the Society's Rooms, 40, Leicester Square, Monday, 3rd inst. The President, Mr. FELIX WEISS, L.D.S., in the chair. Present, a good attendance of members.

After confirmation of minutes and usual business, the Librarian announced receipt of books. The Curator, Mr. STORER BENNETT, stated he had received a humorous sketch in colours of an extraction of a tooth by means of the old-fashioned key. Mr. Merson, of Bournemouth, was the donor. Mr. Farebrother had presented the skull of a bushman, picked up in Africa; on the right side were sockets for three incisors, the left being normal.

Mr. WOODHOUSE presented a necklace composed of human teeth, accompanied by a letter from Mr. H. M. Stanley. The necklace had been taken from the neck of a native killed in a skirmish and was composed of thirty-four teeth, twelve temporary. The teeth were obtained by burning the skull. Mr. Stanley had stated that dental caries was very common among the natives.

Mr. C. V. COTTERELL showed a contrivance for keeping the rubber dam away from the nose in filling incisor cavities. He had found in these cases that gold sometimes peeled or would not adhere, and he believed this was due to the breath of the patient; the nose-guard was designed to obviate this.

Mr. JOHN ACKERY referring to a case of absence of lower incisors reported by him some months ago, said that his attention had been drawn to the fact that such cases were less rare than he had thought, and had then stated. He showed a number of models evidencing this statement. He showed also a model of a case of extensive erosion of incisor, canine and bicuspid teeth. The condition was not due to attrition of the lower teeth. Patient, a male, æt. thirty-five, possessed a distinctly "clean mouth." He used a hard brush. Mr. Ackery also passed round a model of the brother's mouth, in which erosion was seen in the usual place—lower incisors. The dentine had suffered more than the enamel. Two teeth from a man aged fifty-six were shown with erosion on their lingual surface.

Mr. WOODHOUSE asked if the teeth were sensitive. He had found nerve destruction follow severe attrition.

Mr. JAMES STOCKEN had had cases of extreme attrition without sensitiveness.

Mr. ACKERY said no sensitiveness existed.

Mr. LEONARD MATHESON then read a paper entitled "Some Practical Points involved in the Relation of the Upper to the Lower Teeth."

His remarks were grouped under the following heads:—

I. The articulation of the teeth in relation to the etiology and treatment of approximal decay.

II. Irregularities of articulation as productive of pathological conditions of the alveolo-dental periosteum.

III. The "bite" as affecting certain modes of treatment adopted in the correction of irregularities.

I. *The articulation of the teeth in relation to the etiology and treatment of approximal decay.*

Through the action of the "bite" food becomes wedged into approximal spaces, and its decomposition promotes decay. Sometimes the very beginning of decay is due to this cause, though in the larger number of cases the disease may arise before any interspace exists for lodgment of food. When once the coronal wall of the cavity breaks in, food enters in appreciable quantity, and the rate of decay is generally much accelerated, and extends rapidly over the whole approximal surface. When the lodgment of food is the primary cause of decay, the space which admits the food is due to (i.) simple want of contact in two neighbouring, otherwise normal teeth; (ii.) to a flat instead of a contour filling employed on one or both sides of the space; (iii.) to the injudicious use of contour instead of flat fillings.

Much may be done to avoid these causes of decay on the one hand, by contour fillings, or on the other hand by judiciously shaped spaces.

In dealing with "approximal cavities" one seeks:—

(1.) To prevent the recurrence of decay.

(2.) To render the tooth under treatment useful in mastication.

(3.) To protect the gum from irritation.

In dealing with approximal cavities indiscriminately, one method in all cases is to be deprecated—either invariably "contouring" or invariably "separating;" to simply fill the cavity flush from one wall to another without any regard to contour on the one hand or properly-shaped space on the other is worse, often leaving an irregular interval between the teeth likely to produce rapid mischief.

The danger is pointed out of treating a diseased tooth without regard to its relation to its neighbours, to its antagonists, or to the gums and mouth.

Contour filling is desirable, its use being imperatively called for when its employment enables us to achieve the three objects: (1) prevention of future decay, (2) proper mastication, (3) protection of the gums.

When does contour filling accomplish these things better than other methods? And in answer Mr. Matheson says:—When by contouring the filling can be brought into *close* contact with the adjoining tooth. For, apart from the question of appearance, the whole value of a contour filling lies in its knuckling up to the neighbouring tooth, preventing the lodgment of food.

Contour filling is clearly called for when the cavity to be treated is

in a tooth standing so close to its neighbour as that a reasonable amount of contouring will restore the normal relation. In most instances this can be done, but in some cases, when the diseased tooth stands so apart from its neighbour that a restoration of its normal contour does *not* restore the normal relation of the two teeth, contour filling is bad practice, seeing that instead of preventing it favours the retention of food between the teeth. Then recourse must be had to the use of flat fillings and judicious shaping of the surfaces forming the mesial and distal walls of the space. Broadly speaking, this shaping (front teeth not being included) consists in making the walls boldly divergent, and very smooth and straight. Occasionally, when the patient can be trusted to carefully use quill toothpicks and floss silk, the space may be made parallel-sided. The original space may be deliberately increased by means of gutta-percha or wool and mastic before finally shaping and filling, to lessen retention space and save tooth substance.

Such spaces, properly made and used only where contour work is inadmissible, conduce to the comfort and safety of both teeth and gums. Between full contour and the wide space no middle course exists, a narrow, irregular space, especially if the walls are allowed in the least degree to converge at the masticating surface, being fatal both to comfort and health. In doubtful cases, contour is recommended.

When called upon to treat teeth the relation of which to their neighbours and to "the bite" calls for their restoration in contour, but in which disease is so very extensive as to make contour filling very questionable, the use of all-gold collar crowns is said to be invaluable, or in the case of bicuspsids, all gold, faced with porcelain. The particular advantage of this form of crown consists in its being capable of being contoured out in any direction or to any extent, so that it knuckles tightly against the adjoining teeth, and antagonises exactly with its opponents; whilst the collar gives a security and finish which can be obtained by no other method.

Partial gold crowns sometimes render excellent service in the preservation of badly-decayed teeth and the restoration of comfort in mastication. *E.g.*, the mesial half of a tooth may be sound and strong, whilst the distal portion, both approximal and coronal, may be the seat of extensive decay. The amount of sound tissue is such as to make one feel unwarranted in removing it for the sake of inserting a complete crown, whilst the carious cavity is so far-spreading as to make the lasting security of a large filling doubtful. In such a case the contour of the tooth may be fully restored by the nice adjustment of a carefully-modelled shell of fine gold, so made as closely to overlap the margins of the cavity.

II. *Irregularities of articulation, as productive of pathological conditions of the alveolo-dental periosteum.*

(1.) The danger is emphasised of periosteal mischief set up by fillings insufficiently cut down to articulate accurately with antagonising teeth. To avoid this due care is requisite in the modelling of masticating surfaces. Where the upper and lower teeth deeply interlock great indentation is required on the surface of a filling to allow proper play for the tooth biting against it.

A filling or an artificial crown left too high will induce more or less inflammation; occasionally fully pronounced periostitis, but the more common condition is a state rather of irritation, short of inflammation. Tenderness in mastication is present; the contact of the tongue causes pain, whilst the gum remains normal, or almost so in colour, and direct pressure is not painful. In many of these cases sensitiveness to thermal irritants is felt.

(2) There are similar cases, so far as symptoms go, in which the mischief is due, not to a badly-finished filling, but to a disarrangement in the articulation of one or more teeth produced by the forward pressure of an erupting wisdom tooth. Considerable periosteal discomfort, if not pain, in a first or second molar, or even a bicuspid is felt. The tooth pointed out may be perfectly free from caries, and give little or no response to the usual tests for periostitis, and so mislead the observer. But if the tooth be tested by the use of articulating paper it will be seen that there is an undue amount of pressure exerted upon it by its antagonist, and close examination will show the teeth to be displaced by the enormous pressure of a wisdom tooth behind them.

(3) So the eruption of the second, or the first permanent molars, sometimes produces similar results, the teeth complained of in the latter class of cases being the first molars themselves, which will be found to bite cusp to cusp, instead of cusp into depression.

(4) Similar results may follow extraction of teeth. The extraction of one or more teeth leads sooner or later to more or less change in the articulation of the remaining teeth, and one may find periosteal irritation arising from this cause, although it is not common.

The treatment required consists in nothing more than the use of corundum wheels to ease undue pressure, indicated by means of articulating paper. Even in the worst cases it is rare indeed for this simple treatment not to be rapidly followed by complete comfort. The difficulty lies rather in the diagnosis of the cause of pain than the treatment. It is of some assistance, in obscure cases, to bear in mind that the pressure producing the irritation will be found almost invariably to be exercised on one small isolated spot.

III. *The "bite," as affecting certain modes of treatment adopted in the correction of irregularities.*

(1) Extraction, as a means *per se* for the treatment of irregularity.

Some assert it is wrong to extract any tooth which in itself is not beyond saving; but the reader of the paper dissents strongly from so dogmatic a statement. In opposition to the theoretical desirability of

keeping the arch intact it is urged that in crowded mouths the articulation is rarely quite normal, and is frequently much improved by extraction, and in the second place, that even where the "bite" is normal, the teeth may be so jostling one another, so weak in structure, and so extensively decayed, that it is far better practice to remove some of them bodily, even though by so doing one may disarrange the articulation and leave spaces which form receptacles for food, to the detriment of adjoining teeth, than to attempt to save every individual organ in the mouths of young patients often incapable of bearing extensive operations.

The practice of removing the four first molars is, Mr. Matheson holds, often a rational procedure in view of the facts that these teeth are very commonly the most prone to decay, and that their removal gives a larger amount of room than the loss of any other tooth does. But in a good many cases there are considerations often overlooked, mainly concerned with the "bite," which contra-indicate the choice of the molar, and point to one of the bicuspid as the tooth to be sacrificed.

The first molar is the chief grinding tooth. As a masticator it stands pre-eminent over the other teeth from its very large masticating surface, its position is also uniquely favourable for the efficient and comfortable trituration of the food, it being far enough back to obtain powerful muscular assistance, and far enough forward to enable the tongue easily to keep large morsels of food between it and its antagonist. The second molar cannot fully replace it, as after the extraction of the latter the vertical axis of the former is almost invariably tilted forward to some extent, so that it does not squarely antagonise with its opponent, the distal portions of the crowns alone coming into close apposition. This imperfect articulation of the second molars need not be feared when the first molars can be retained, as the latter do not undergo any appreciable amount of tilting after the removal of the second bicuspid. The amount of space required in a crowded mouth is often not greater than the loss of four bicuspid will furnish, so the comparative condition of molars and bicuspid ought to be most carefully examined and weighed at the time that extraction is decided on. The second bicuspid is often in a condition quite as bad as the molar, considering the comparative ages of the two teeth. In these cases, providing that the molar is not so diseased but that it can be rendered a permanently useful tooth, the best course to pursue is the extraction of the second bicuspid. In addition to the advantages of retaining the molar which have already been pointed out, it may further be noticed first, that the loss of a bicuspid in its stead gives more immediate relief to crowded incisors and canines; and second, that given a molar and bicuspid equally diseased, it is, as a rule, much easier to save satisfactorily the former than the latter.

When the loss of the first molars is fairly indicated, it is neverthe-

less generally of the utmost importance that these teeth should be patched up and kept comfortable, and the extraction if possible delayed until the second molars are quite erupted, because (1) if the extraction is done at an earlier date the health of the patient is seriously endangered by inability to masticate properly; (2) the second molars tilt less the later the extraction of the others takes place; and (3) early extraction may injuriously affect the position of the incisors.

(2) "Raising the bite."—In those cases of irregularity where projecting incisors are kept in their abnormal position by the close contact of the lowers, it becomes necessary partially to "raise the bite."

The methods for accomplishing this vary; a typical appliance for the purpose is a simple vulcanite plate made to cover the palate without capping any of the teeth. This being regularly worn for some time prevents the lower incisors from rising any more, their tips being made to impinge against the vulcanite, whilst it allows of the molars lengthening. Mr. Matheson points out that the "bite" of the lower incisors which, if not the original cause of the projection of the upper teeth, is the means by which it is maintained, and unless close attention be paid to the "bite" generally throughout the conduct of such a case, failure in treatment is probable. Having, by means of the simple palate plate, obtained space between the upper and lower incisors, and having inserted an appliance for the retraction of the uppers, it is necessary to prevent the lowers rising again. If, for instance, the plate used in the retracting process is made—as so many regulating plates are—to cap the molars, then it may be found that by the time the upper incisors have been brought into a normal position the lowers will have grown upwards, so that when the plate is out of the mouth they will forcibly press, as before, against the uppers. Hence the necessity of avoidance of capping the molars, leaving as little room as possible for the lower incisors to rise in.

In the correction of other forms of irregularity, and in the use of retaining plates, a careful study of the "bite" may show that the articulation will suffer from prolonged capping. When there is difficulty in obtaining a firm hold for plates without capping, appliances attached firmly to one or more of the posterior teeth by means of snugly-fitting collars and oxy-phosphate cement prove very useful.

(3) "Jumping" the bite.—The operation is called for in cases where the upper incisors project, where the lowers bite far behind them, and where, besides, the bicusps and molars inter-articulate abnormally, the lowers closing too far back, by the whole width of a tooth, the chin being consequently very retreating, and the whole facial expression weak and foolish. What has to be done here, if possible, independently of some retraction of the upper incisors, is an alteration in the position of the lower jaw, so that the chin may be brought bodily forwards. Dr. Bogue has described one way: The bite was "jumped"



simply by the expansion of the upper arch in the canine region. In this case it appeared that the distance between the upper canines—measured directly across the palate—being abnormally small, the lower teeth were simply unable to close in their proper position, and the whole lower jaw was kept back. The lowers biting as usual inside the uppers, but themselves forming an arch of normal width, the narrowness of the upper arch kept the lower back, so that when the former were expanded, the lower jaw as a whole, in the course of a few days, came forward and articulated in the usual manner with the upper.

Mr. Matheson then described a similar case. Having drawn back some prominent upper incisors in a case with a markedly retreating chin, and desiring to keep them in position, a retaining wire was attached to gold caps made to fit the second upper bicuspid—the first molars being gone and the second scarcely long enough to furnish a secure hold. In order to prevent the bicuspid themselves being brought forward, instead of the incisors being held back, the caps were furnished with tiny inclined planes, directed downwards and backwards for the lower bicuspid to bite against. In a week, not only had the object contemplated been secured, but the lower jaw had come right forward by the width of a tooth, and the retreating chin offended one's eye no longer.

Mr. ASHLEY GIBBINGS asked if Mr. Matheson had ever seen the bite jumped as a result of extraction of the six-year-old molars, as he had found this to occur; the forward movement of the lower jaw in this case requiring treatment by an apparatus capping the molars, &c.

Mr. WALTER COFFIN thought that cases were exceptional in which the bite jumped to any great extent, *e. g.*, the whole width of the tooth. When teeth were abnormally articulated, a judicious extraction might produce what must be termed a partial jumping of the bite.

Mr. JAMES STOCKEN remarked that it was wrong to extract the six-year-old molar before the development of the twelve-year-old molar, as so doing caused tilting, preventing due approximation with the upper jaw.

Mr. MATHESON thought that the case cited by Mr. Gibbings might be one of those injured by premature extraction of the first molar. As regards jumping, he quite admitted there was partial, as well as complete, jumping of the bite. In reply to Mr. Coffin, he said he should always look at the position of the canines to see if the upper canines might be very close together, and in the second place, if they were widely enough expanded for the lower jaw to come forward, he should do what he did in his own case, put on a gold cap on the upper bicuspid with an inclined plane backwards and downwards, so that the lower cusp was urged forward.

Mr. HERN referred to two points—firstly, contour fillings. When a cavity was suitable for a contour filling, it would be advisable to get

a previous separation, which would give room for knuckling back ; as soon as the tooth was filled it would knuckle back to its previous position. In the second place, both the cases of jumping of the bite mentioned had been when the lower jaw had come forward easily in relation to the upper teeth.

Mr. C. ROBBINS said where the contour was so exaggerated he preferred the V-shaped spaces to flat fillings. In reference to jumping of the bite, he cited a case of a patient, aged fifteen, for whom he had partially pushed out an instanding lateral by expanding the arch. The lateral, however, would return to its position—a fault he found due to a cusp-to-cusp bite. He obtained occlusion by means of a little grinding and sand paper, and so a satisfactory result was arrived at.

Dr. FIELD suggested they should ask what they understood by contouring ; if it were meant the restoration of the normal contour, he had not met with cases which were prejudicial, and, indeed, he believed that contouring gave the best results. His experience went to show that the chewing bar was prejudicial, in that it necessitated too much destruction of good tooth substance, and might even lead to undermining the cervical margin of the teeth.

Mr. MATHESON having replied upon the whole discussion, the usual votes of thanks were passed, and the next meeting was announced for December 1st, when a paper will be read by Dr. B. W. Richardson, on "Hæmorrhage following Tooth Extraction : its Cause and Treatment ;" a paper by Mr. Storer Bennett, on "Some Interesting Specimens of Comparative Pathology at Present in the Society's Museum ;" Casual Communication by Mr. Trueman, "On a Case of Eruption of a Tooth under the Chin." Mr. J. O. Butcher will show new engine attachments.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

### Removal of the Gasserian Ganglion for Severe Neuralgia.\*

BY WILLIAM ROSE, M.B., F.R.C.S., Professor of Surgery at King's College and Surgeon to King's College Hospital, &c.

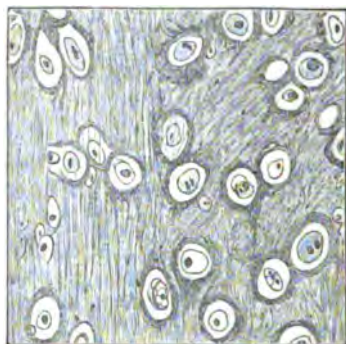
F. M——, aged sixty, was first seen by me on August 19th, 1888, in consultation with Mr. Padman. At that time she was suffering from severe neuralgia, affecting chiefly the inferior divisions of the fifth nerve on the right side of the face. This had resisted ordinary local and constitutional treatment. Stretching of the inferior dental nerve was decided on, and this was done on the following day, the patient

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\* Being a paper read before the Medical Society of London, October 27th.

being anæsthetised. The nerve was stretched just above its entrance into the dental foramen; it was also divided at its exit at the mental foramen, both steps being effected inside the mouth. This was followed by considerable relief until March, 1889, when the pain returned with great severity. On March 19th the lower jaw was trephined and a disc of the outer bony plate removed, thus exposing the nerve in the dental canal. Half an inch of the trunk was excised. Partial relief followed this, and it was not until March, 1890, that I was again consulted, the pain being more severe in the original situations, and in addition the right side of the tongue had become excessively painful, indicating an extension of the mischief to the lingual nerve. On March 18th, the inferior dental and lingual trunks were cut down upon in the pterygoid region through an incision parallel with the zygoma, dividing the masseter, and then deepening and enlarging the sigmoid notch with the trephine and cutting pliers—an operation which I have performed on several previous occasions, and one originally suggested to me and practised by Mr. Victor Horsley. Portions of both lingual and dental nerves were thus excised. The result of this was to produce numbness and loss of sensation in the right side of the tongue and in the integument covering the right half of the lower jaw; but unfortunately the pain which had occasionally manifested itself in the upper jaw and cheek became greatly intensified. It implicated the alveolar border of the right upper maxilla, where the agony was greatest, and extended up into the temporal region to the top of the head. The slightest touch upon the gun produced a shock of agony that was terrible to witness, and the sudden approach of anyone, or the banging of a door was sufficient to induce a paroxysm. Opiates and other sedatives had practically no effect. It was quite evident that the superior maxillary nerve was involved, and the patient's sufferings were so great that some serious mental derangement appeared imminent. Taking into consideration the previous relapses after partial nerve excision, I decided to make an attempt to remove the Gasserian ganglion, as nothing short of its destruction seemed to hold out any prospect of relief. I also decided to remove the superior maxilla at the same time for the following reasons: first, on account of the extensive disease which probably existed in the nerves contained in it (and this was amply borne out by subsequent investigation); secondly, the increased facility thus given for opening the base of the skull; and thirdly, in deference to the express desire of the patient that, whatever else was done, the side of the jaw where the pain was greatest should be removed. Accordingly, on April 2nd, fifteen days after the last operation, assisted by Mr. Cheate, the surgical registrar, and Mr. Penny, the house surgeon, the ordinary operation for removal of the superior maxilla was in the first place performed, and when the bleeding had been arrested and the foramen ovale exposed to view, the pin of a half-inch trephine was passed into the foramen, which acted as a centre, and the ring of bone surrounding it was carefully sawn and lifted out. The Gasserian ganglion could then be seen lying upon the apex of the petrous portion of the temporal bone, a small Schall electric illuminator being of great help at this stage of the operation. The ganglion was loosened by gently passing an aneurysm needle beneath it, and removed in three or four pieces by the aid of a narrow probe-pointed bistoury and fine-hooked forceps, the dura being uninjured. The bleeding was slight. The

incisions in the cheek were brought together in the usual way with interrupted sutures of wire and catgut, cyanide gauze was applied, and the eye carefully protected with a soft pad. The patient suffered somewhat from shock, but her general condition on the following day was satisfactory. She however, complained of heat and pain at the back of the right eyeball, which, on examination showed considerable conjunctival congestion and chemosis. Next day this had increased, and was accompanied by haziness of the cornea, which subsequently ulcerated and eventually necessitated excision. In all other respects steady progress was made. The old pain ceased from the day of operation and has not since returned. She expresses herself as being in better health than she has been for years past. On October 25th she was carefully examined by Dr. Ferrier, and it was interesting to observe that although sensation and taste are practically absent from the right anterior half of the tongue, it is distinctly present posteriorly.



Drawing of a microscopic section of a portion of the excised ganglion, showing an increase of interstitial fibrous tissue between the ganglionic cells. Seen under one-fifth objective.

There is circumscribed anæsthesia of the right cheek and obvious wasting of the temporal, buccal, and other muscles on that side. The movements of the lower jaw are limited, probably on account of the operation in the pterygoid region. There is no paralysis of the facial nerve. The patient was shown to the Fellows of the Society, and also the ring of bone which was removed from the base of the great sphenoidal wing, together with the superior maxilla, the infra-orbital canal of which was laid open, in order to demonstrate the thickened state of the nerves. Microscopic sections of the excised ganglion were also exhibited, together with diagrams showing the anatomy of the parts dealt with.

As far as I have been able to learn, this is the first instance in which the Gasserian ganglion has been successfully removed in the human subject. It is undoubtedly an operation of considerable danger and difficulty; at the same time I feel convinced that the severity of the symptoms and the hopelessness of being able to effect relief in any

other way justified such a procedure. The loss of the eye is greatly to be regretted, and, it is to be hoped, need not necessarily occur in future cases. In the present instance the patient is more than contented with the immunity from pain which she now enjoys, and thankful to have gained it, even at the sacrifice of an eye. In any future case of the kind I should be inclined to stitch the eyelids together as an additional protection.—*The Lancet*.

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### Deaths from Anæsthetics.

THE following letters cannot fail to be of interest to the large number of our readers who administer anæsthetics :—

*To the Editors of "The Lancet."*

SIRS,—It would seem from recent reports that fatal accidents from anæsthetics are not becoming less frequent. It is a serious matter if there is a source of danger from them which has never been recognised, for if so fatalities must and will continue to occur. I have long held that there is such a danger, and have lately laid my views before the profession in some detail in a pamphlet entitled "A New Theory of Chloroform Syncope, showing how the Anæsthetic ought to be administered," and still more recently in a paper read before the Medico-Chirurgical Society of Glasgow. According to the new view, the vapour of chloroform exercises an important action on the pulmonary circulation or on some part of the respiratory tract, and this is attended by reflex influence on the vagus through the medulla, with inhibition of the heart. Now, when any agent directly stimulating the vagus is suddenly removed, great acceleration of cardiac activity is liable to occur, and the danger of syncope in such circumstances is well known. It must be evident that the same will apply to any agent operating through reflex mechanism on the vagus and the heart. Now, observations have shown that when the inhalation of an anæsthetic is left off at an early stage the vapour leaves the lungs in about ten seconds. Experiment has demonstrated that when a cat is made to breathe about 3 per cent. of chloroform vapour for not more than a minute, and is then allowed to breathe fresh air, the pulse, which is at first from 70 to 80, will in ten seconds suddenly rise to 200, and this is liable to be followed after another minute by a lengthened pause in the heart's action, no beat being audible for sixty seconds—*i.e.*, during the third minute from the commencement of the experiment. The theory is mainly founded on this experiment, and it could be shown to explain various facts which have been observed by some recent experimenters. This pause in the action of the heart of a cat is held to be the analogue of the primary syncope in the human subject, although the former seems always to recover from it. If so, it follows that acceleration of the pulse must precede the syncope, and this has actually been observed in several instances in which the pulse has been described as rapid and running. Hence administrators ought to keep up an atmosphere of not less than 2½ per cent. of chloroform vapour without a break until deep anæsthesia is induced, and they must make sure of the means by which this is to be done. If they will not do so, then they ought to watch for any sudden acceleration of the

pulse as the first indication of danger, and for this purpose an observer might apply a long double stethoscope directly to the heart.—I am,  
Sirs, yours truly,

ROBERT KIRK, M.D.

*Partick, Glasgow, October 28th, 1890.*

*To the Editors of "The Lancet."*

SIRS,—When reading the account of a death from methylene I was struck by what appears to me to be the excessive amount of the anæsthetic which had been used, viz., from three to four drachms in four or five minutes. During the last four years I have administered methylene to nearly 200 patients over the age of fifteen either in the Warminster Cottage Hospital or in private, and have seen it administered by others many times, and it has always seemed to me to be the pleasantest anæsthetic both for the patient and administrator. The inhaler I use is Snow's, as modified by the late Mr. Coates of Salisbury; in this instrument the methylene is dropped through the perforated top of a metal globe on to some blotting-paper wrapped in a coil inside, the inspired air passes over this through a tube into the face-piece, and after being expired passes out through a mica valve placed in the top of the latter; there is another mica valve at the junction of the tube and face-piece, to prevent the expired air returning through the globe. By this means the air is never rebreathed. I now come to Mr. Coates's method of administration. Having adjusted the face-piece, allow the patient to breathe the air alone several times to allay nervousness and then drop in five minims of methylene; after thirty seconds drop in ten minims, and at the end of the first minute drop in another ten, and after this administer fifteen minims at the end of every minute until the patient is perfectly anæsthetised. I have never seen the patient struggle or seem frightened when administered in this way at the commencement. After the patient is totally under, ten minims can be given from time to time so as to keep the pupil contracted and the conjunctival reflex just abolished. I have generally found that if the contracted pupils are watched, and when seen to dilate five minims are added immediately, the total quantity of anæsthetic used in a prolonged operation is very small. I regret I have not kept carefully the exact quantities used in the several cases, but about six drachms are enough for an excision of the breast and clearing the axilla of glands. The time taken in fully anæsthetising a patient varies from five to seven minutes, using from 85 to 115 minims during that time. When first I gave it I had someone to measure it out and pour it into the globe, but this can be overcome by dropping in so many drops, having previously ascertained the number of drops which from the bottle used correspond to a measured five minims. If anyone could suggest a dropping bottle by which one could let out a known quantity at a time and be able to vary the amount at pleasure, I think it would be a great boon.

From my limited experience of its administration I should say that the advantages of methylene are the following:—1. The quiet way in which the patients go off, especially in the case of alcoholic subjects, as compared with ether. 2. The small amount required if administered as above. 3. Sickness after coming out of methylene is not so troublesome. If it does come on, it is not until from eight to twelve

hours after the operation. 4. The total absence of any dangerous symptoms during its administration. 5. The rapidity with which its effects pass off. This is doubly advantageous : first, if by any chance there were any dangerous symptoms produced ; and, secondly, the administrator must keep his attention riveted on the patient, or else he will come round before he expects it. 6. I know of nothing to contraindicate its administration.

I am, Sirs, yours faithfully,

Warminster, November 3rd, 1890.

J. W. JOLLYE.

### The General Medical Council and the Dental Profession.

*To the Editors of "The Lancet."*

SIRS,—It is felt by many that the time has arrived when the dental profession should have a representative in the General Medical Council, and I venture to lay before your readers the reason why this conclusion has been arrived at, but I trust that what follows may not be taken as a reflection upon that body, for as a profession we are greatly indebted to it for its administration of the Dentists Act in the past.

It may not be generally known that the Dentists Act is administered, and a register of dental practitioners and students kept, by the General Medical Council, but although that body numbers over thirty, the dental profession is without representation. When, therefore, matters of dental interest arose, as was the case at the last meeting of the Council, there is no one with *special* knowledge who could be considered an authority in such matters, and a judicial body of such high authority as the General Medical Council cannot be expected to seek the help of an outside opinion.

If it be admitted that such an alteration in the constitution of the Council is desirable, there are two ways in which it may be effected : First, the Privy Council could, when a vacancy occurs amongst the Crown nominees, appoint a dentist, who should also be upon the Medical Register, to the post. Secondly, at the next election of direct representatives the medical profession could adopt a dentist as one of their candidates to fill one of the vacant chairs. As there are over thirty members of the medical profession on the Council, it is hardly an excessive demand that one of the number should be an individual who, because he is practising dentistry, would be likely to have a more intimate knowledge of matters relating to the welfare of the dental profession and be able to advise on the important matter of dental education. Such a candidate would be none the less able to consult with his colleagues on matters of general medical interest. Our desire would be that such a candidate nominated by the dental profession should be adopted by and receive the support of the medical profession as a whole.

I am, Sirs, your obedient servant,

Cavendish Square, W., Oct., 1890.

MORTON SMALE.

We publish elsewhere a letter advocating the claims of registered dentists to a representative in the General Medical Council. Mr. Morton Smale's letter is written in a moderate and reasonable spirit and deserves consideration. His chief point is that when matters of

dental interest arise there is no one of special knowledge who could be considered an authority in such matters, and the Council is without a guide. Such a proposition requires to be discussed not only with reference to itself, but to its bearings on the future composition of the Council. And we venture to say that, so discussed, it will not prove so obvious as might at first appear. But, first, let us see if any particular hardship has existed. If so, it has not been alleged. It is true that at the last meeting serious complaints from the dentists were received by the Council. But they were carefully examined, and, we believe, practically met. Mr. Smale himself allows that the profession is greatly indebted to the Council for its administration of the Dentists Act in the past. We do not doubt that any representations made to the Council as at present constituted from the registered dentists will always meet with impartial and attentive consideration. So much for the proposition as it stands by itself; but if it be considered in what it implies, we feel the more need to be chary in accepting it. If dentists are to be conceded a special representative, why not ophthalmic surgeons? Indeed, it is clear that as an eye is more than a tooth, so the claim of the latter to special representation exceeds that of dentists. If a Midwives' Bill should pass, are we to be told then that the midwives must have a seat in the Council? We shall not push this objection into the region of the ridiculous, but it might easily be so pressed. We have said enough to show that Mr. Smale's proposition is not to be accepted hastily. Specialism, it must be remembered, is a defect. It is an incompleteness. A dentist ministers only to a bit of the human body. It is not desirable to specialise in the General Medical Council. It would not even be good for dentists, whose best interests are served when they are kept up to full professional standards of knowledge and of conduct. The direct representation of the profession is already too slight to expect that the profession would give up one of its representatives to this specialty and another to that. Moreover, the law requires that direct representatives be registered medical practitioners. The only other source to which the dentists can look is the Crown. But its representation has been shorn already, and it is not very likely to initiate a representation of specialties which are best controlled by men who view special practice from the broader standpoints of medicine, surgery, and midwifery. Of course, there are men on the Dental Register who are also on the Medical Register eligible in point of law, and equally so in point of breadth of knowledge and of training. But they cannot feel themselves unrepresented in the existing Council; they are medical practitioners *and* dentists. And the more of such the better.—*The Lancet*.

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IN view of the fact that the Dental "Register" is compiled, and the Dentists Act administered by the General Medical Council, it is a matter for surprise that provision was not made for the appointment of at least one member to represent the interests of this department of surgery—for such at present it may justly claim to be. It was certain that the lapsus would be recognised so soon as the dentists had acquired some coherence and *esprit de corps*, and a movement with this object on foot is now fairly under weigh. There may be technical difficulties in the road, but we do not suppose that the Council would be averse to a dental assessor, and no opposition is likely to come from any other source.—*The Medical Press*.

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*To the Editors of "The Lancet."*

SIRS,—The dentists must be gratified at the consideration you have given to the suggestion that a dental surgeon should have a seat upon the Medical Council, and most of them will agree on the whole with the leading article on the subject in your last week's issue. The position occupied by the dentist is an unique one, and his speciality has no analogue, for he has his separate Act and Register, the sums paid for registration to the General Medical Council being kept as a separate dental fund. He also has a special curriculum and diploma, and, while all may agree with you that specialism is a defect, it must be agreed that dentistry is a speciality that is necessary for the general welfare, and in no branch of the medical profession is the student at the end of his career so well equipped in his own department as is the dental student. In the future some of the business that the Council must consider will be of purely a dental character, and inasmuch as the sittings of the Council cost 22s. a minute, it is desirable, to save the expenditure of the Dentists' Fund, which necessarily is a small one, that some body cognisant with the needs and requirements of dentists should have a seat upon that Council to direct the discussion of a subject with which most of the Members are not familiar, and thus save both time and money.

It is desirable that this question should be discussed upon its merits rather than in relation to the manner in which the General Medical Council has so far administered the Dentists Act. Is it possible to find gentlemen who will adequately represent both the dental and medical profession? It might not be invidious to mention such names as Dr. John Smith of Edinburgh, a past President of the Royal College of Surgeons; Dr. Theodore Stack of Dublin, a Member of the Council of the Royal College of Surgeons in Ireland; and Mr. C. S. Tomes, F.R.S., of London. These gentlemen, it must be admitted, are worthy and desirable candidates, who, while specially interested in dental politics, have at all times shown a large interest in the welfare of the medical profession. It would be difficult to select three names more worthy of support. The author of this letter is alone responsible for naming these three gentlemen without their consent, and offers his apology to them for having done so.

I am, Sirs, your obedient servant,

*Cavendish Square, November 1st, 1890.*

MORTON SMALE.

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*To the Editors of "The Lancet."*

SIRS,—The notice of Mr. M. Smale's letter in your last issue encourages me to hope that the dental reform movement has passed its probationary stage, and that its leaders have in some measure secured the favourable consideration of *The Lancet*. I therefore venture to point out to you what I believe to be the real import of Mr. Smale's letter, and how it might be met without detriment to the medical profession. I am quite sure that in advocating dental representation Mr. Smale does not contemplate the election of an individual who would only represent dentists, but that he was writing with the

knowledge that there are amongst them many men who are well qualified both by education and by scientific attainments to be worthy representatives of the medical profession, and that amongst these there are some who have long been familiar with the many questions which occupy the attention of the Medical Council and the medical profession generally. Such men have also a knowledge of dental business which would prove invaluable to the Medical Council in its administration of the Dentists Act, and, it may be hoped, make their proceedings more appreciated by the Members of the dental profession than they have hitherto been. If we take Dr. John Smith, who was president and also served on the Examining Board of the Royal College of Surgeons of Edinburgh, Dr. Theodore Stack, a member of the Council of the Royal College of Surgeons in Ireland, and Mr. C. S. Tomes, F.R.S., of London, we have three gentlemen who have for years taken an interest in all the branches of medical education, and who possess the additional advantage already referred to. Would it be too much to ask the Members of the medical profession to give their votes to these gentlemen in their different districts as vacancies on the Council may arise, and thus, without impairing their own representative, secure to the Medical Council that guidance in dental affairs which I believe they much need?

I am, Sirs, yours obediently,

November 3rd, 1890.

J. S. TURNER.

### A New Method of Producing Anæsthesia with Chloroform.

THERE is a determined effort being made by some of the younger French surgeons to introduce a so-called new method of administering chloroform for the purposes of surgical anæsthesia. This new method has as its basis the principle of giving small and continuous doses. It is not in reality new, but is a plan which has never been widely adopted, nor received the recognition which it is believed it deserves.

The method was described in detail by Dr. Léon L'abbé, in 1881, before the Académie de Médecine. In 1883 Dr. Peyraud, of Bordeaux, described a similar procedure, and insisted, in several communications, upon its advantages.

In 1887, Dr. Paul Boncour, a pupil of L'abbé, described the method again; and M. Péraire, another pupil of L'abbé's introduced it into the service of M. Terrier at the Hôpital Bichât. Last year M. Schwartz again called attention to L'abbé's procedure in the *Revue Generale de Clinique et de Thérapeutique*. Now, M. Marcel Baudoin, lately of the Hôpital Bichât has given another full account of it in the *Gazette des Hôpitaux*.

The very great delay shown by surgeons in recognizing this method of L'abbé's indicates, possibly, that it has some radical defects; or it may only show the very pronounced conservatism of surgeons in matters of routine practice.

The details of the process of anæsthetising patients by continuous small dosage are described by Dr. Baudoin with great minuteness, and every possible precaution in case of accident is taken. The "manuel opératoire" thus furnished is a most excellent one, and ought to be read by every young surgeon and many of the older members of the

profession. As regards the administration of the chloroform itself, the process is very simple. No apparatus or special inhaler is employed. A folded handkerchief is laid upon the face carefully, so as to cover the nose and mouth. It is pulled up a little in the middle so as to make a kind of cone. Then two, three, or four drops of chloroform are poured on the handkerchief, the face being carefully watched for signs of reflex syncope. It may be necessary at first to raise the handkerchief for a moment, but after the first inhalations this should not be done. At the end of a quarter of a minute, four or five more drops are allowed to fall upon the most elevated part of the handkerchief. At the end of half a minute more four to six drops are poured out. This process is continued for fifteen or twenty minutes, when the patient will be anæsthetised. Only seven or eight grammes of chloroform will have been used, whereas by other methods twenty to thirty grammes are usually required.

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### Uniting Porcelain to Amalgam.

BY DR. C. H. LAND, of Detroit, Michigan.

As an auxiliary to the process of moulding sections of porcelain, so that they may be made to conform to the exact shape of the cavity in a decayed tooth by means of a metallic matrix, it has also come to my lot to discover and perfect a method of causing amalgam to adhere to porcelain, or any other vitrified substance, demonstrating a wonderful degree of tenacity; and most important, provides a means of establishing both fillings, inlays, and porcelain crowns with a cement that is absolutely impervious to the action of the fluids of the mouth. By actual tests the adhesion will sustain a weight of over two hundred pounds to the square inch of surface covered in practice. I have molar crowns composing simply the cusps; the proximal side has a biscuited or porous surface fused thereto. This surface is then saturated with a solution of gold, and, when completed, forms a tooth section provided with a coating of pure gold, adhering firmly to the porcelain. To this gold coating amalgam will become thoroughly and firmly attached. In many instances the roots of molar teeth may first be built up with amalgam and allowed to harden; it is then trimmed to a convenient shape, a suitable gold-lined crown selected, and amalgam burnished to the gold surface; also amalgam is burnished over the prepared root, and the two are carefully malletted together; a quick-setting cement is then placed between the crown and the adjacent teeth. This holds the cap in place until the amalgam becomes hardened, when it can be removed and all rough surfaces polished. By the aid of this new discovery a great variety of new and useful operations are made possible.

Large cavities in molar teeth may have porcelain stoppers amalgamated in place. Eighth, quarter, half, three-quarters, and entire crowns, may be cemented to defective teeth with a substance that years of experience have shown is absolutely free from being destroyed by the secretions of the mouth.—*Items of Interest.*

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## MICROSCOPICAL AND LABORATORY GOSSIP.

CURIOUS EXPLOSION.—On Sunday evening last a most curious explosion occurred here in the surgery of one of our local medical men. A large glass mortar that had been used for making a simple chalk mixture in the morning, had been left standing on a table, when, without any apparent cause, or anyone being near it, it exploded with a loud report, blowing itself into hundreds of little pieces, the largest of which was about the size of a hazel nut. These pieces had the appearance of glass that had been heated and suddenly chilled in water, and could be easily crumbled into tiny crystal-like bits. Have any of "ours" had a similar experience with glass mortars? I should be glad if anyone could explain this peculiar phenomenon.—*English Mechanic and World of Science*.

THE following quotation from Messrs. Ash & Sons' Quarterly Catalogue may be of interest:—

"GARTRELL'S GAUGE.—Experience has proved that the pressure stated, in our 1886 Catalogue, as necessary for vulcanizing dental rubber with this gauge is too low. Mr. Gartrell says:—'I find that the gauge will vulcanize all your rubbers, except Child's G., at about 100 lbs. pressure for an hour. After considerable use the Bourdon tube, in the gauge, which receives the steam pressure, may get strained a little, and it will then be necessary to vulcanize at 105 or 110 lbs. pressure by the dial.' Like ourselves Mr. Gartrell also finds that it is useless to expect agreement between the gauge and a thermometer, when they are both used on the same apparatus."

THE *International Dental Journal* prints the following statement:—Dr. Green, New Albany, suggests that, in setting a porcelain inlay in cement, the piece of tooth be made as hot as can be held in the fingers before pressing home in the cement. The cement will set much harder.

THE MOST CELEBRATED TOOTH IN THE WORLD.—It may not be generally known that "the most celebrated relic of Buddha now existing is in Ceylon, namely, the dalada, or left canine tooth, a piece of discoloured ivory two inches long (much too long for a human tooth). This is preserved in a small chamber in the

vihara (temple) attached to the old palace of the Kandyan Kings, enclosed in nine successive bell-shaped golden and jewelled cases, each locked, and the key kept by a separate official." This relic is probably revered by a larger number of people than any other relic in the world. Taking the two most moderate estimates of writers on the subject of Buddhism, Sir Monier-Williams reckons the number of Buddhists at one hundred millions; but Dr. Happer, an experienced American, estimates that there are only seventy-two and a half millions. Some writers have fixed the number at five hundred millions, but this is now considered a great mistake.—*The World's Religions*.

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PROFESSOR ELIHU THOMSON has, it is said, recently devised a method of case-hardening iron or steel by means of the heat produced by the passage of an electric current. His process consists essentially in heating the object electrically, and then applying to the metal so heated a surrounding envelope—either gaseous, fluid or solid—for the purpose of changing or preventing change in the quality of the material, according to the special end to be attained.—*English Mechanic and World of Science*.

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THE material here described may possibly prove useful in laboratory work, we therefore quote the account of its properties and preparation from the *English Mechanic and World of Science*:

"CALLENDER'S SUBSTITUTE FOR CELLULOID.—Just as celluloid has been found a useful substitute for ivory, so a rival to that has been found in what is called 'Lactite,' patented by Mr. W. M. C. Callender. The patentee says the 'Lactite' is produced by reducing casein (or the solids in milk) to a partly soluble or gelatinous condition, by means of borax, or ammonia, or by other suitable means, and then mixing it with a mineral salt dissolved in acid or water, or acid and water, which liquid is subsequently evaporated. In carrying out the invention, he advantageously places ten kilogrammes of casein in a vessel, and incorporates it under heat with three kilogrammes of borax previously dissolved in six litres of water. When the appearance of the casein becomes changed he draws off the water, and the residue should then be of a consistency somewhat resembling melted gelatine. While in this state he adds one kilogramme of a mineral salt held in solution by three litres of acid. Almost any of the salts of iron, lead, tin, zinc copper, or other mineral salts soluble in acid may

be used. The acid employed depends upon the salt used, as only such acid should be used as will properly dissolve the salt. The salt employed depends upon the exact colour required in the finished material. In practice he has obtained good results by the use of acetate of lead and acetic acid. The solution of the mineral salt in acid must be thoroughly incorporated with the previous mixture of casein and borax; this is a matter of some difficulty, but can be accomplished in a mechanical mixer. When the mixture is effected the solid matter will be found separated from the greater portion of the acid and water, which should then be drawn off. The solid matter should be subjected to great pressure to drive out all possible moisture, and any moisture which may remain should be evaporated under great heat, or by other suitable means, the resulting product being the new material. The new material may either be supplied in the form of sheets or rods, or moulded in any form desired, and it can be coloured, as required, either by the admixture of pigments or by aniline or other dyes. The cost of material may be lessened by the admixture of a certain proportion of other substances, such as precipitated lime or chalk, or other similar substances soluble either in the acids, in the casein, or in the borax and water. Instead of rendering the casein soluble or gelatinous by means of borax, the same result may be obtained by the use of ammonia, or by any other suitable means. The combination of the materials can be effected in many ways, as these can be varied according to the exact use for which the 'Lactite' is intended; for general purposes, however, the patentee finds satisfactory results from the above-described process, proportions, and ingredients, and they sufficiently describe the subject of his invention."

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## ANNOTATIONS.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were at an ordinary meeting of the Council on Thursday the 13th November admitted Licentiates in Dental Surgery:—Messrs. George Harris Actor, 2, Woodlands Road, Barnes, S.W., Charing Cross and Dental; James Enderby Appleton, M.R.C.S.Eng., Westcombe, Blackheath, S.E., Charing Cross and Dental; William Henry

Buckley, 54, Shaw Road, Oldham, Manchester ; Ernest Rogers Bull, 91, Brecknock Road, Camden Town, N.W., Charing Cross and Dental ; Francis Burton, 221, Norwood Road, S.E., Charing Cross and Dental ; Frederick Edward Cutts, 36, King Street, Lancaster, Westminster and National Dental ; William Herbert Davies, 4, Clifton Villas, Gunnersbury, Charing Cross and Dental ; Henry Dormer, The Priory, Horsley, near Stroud, Gloucester, Middlesex and Dental ; Charles Furseman Efford, 11, Malpas Road, Brockley, Middlesex and Dental ; Frederick George Hall, 391, Caledonian Road, N., Middlesex and Dental ; Walter Stanley Holford, M.R.C.S.Eng., Worcester House, Sutton, Surrey, St. George's and Dental ; George Mulready Keevil, 15, Keppel Street, Russell Square, Middlesex and National Dental ; William Robert Larbalestier, 27, Ilminster Gardens, Clapham Junction, Charing Cross and Dental ; George Lombardi, 17, Great Marlborough Street, W., Middlesex and National Dental ; Cyril Darby Marson, 28, Earl Street, Stafford, Birmingham ; William May, Fortescue, Thorverton, Devon, Charing Cross and Dental ; Alfred Moore, 20, Great Alie Street, Goodman's Fields, London and National Dental ; Ernest Parsons, Horseheath, Cambridge-shire, Charing Cross and Dental ; Carl Schelling, 82, Upper Gloucester Place, N.W., Charing Cross and Dental ; James West Summers, 15, Norton Folgate, E., Middlesex and Dental ; Louis Crowhurst Tomlyn, 81, Florence Road, New Cross, S.E., Charing Cross and Dental ; Joseph George Turner, 11, Grange Park, Ealing, W., St. Thomas's and Dental ; William Henry Wheatley, 14, St. James's Road, Victoria Park, N.E., Charing Cross and Dental ; Percy Harry White, M.R.C.S.Eng., 3, Moore Street, Cadogan Square, Edinburgh and National Dental ; Michael Yeatman Woolf, 1, Marlborough Place, St. John's Wood, N.W., Charing Cross and Dental.

Eleven Candidates were referred.

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FACULTY OF THE PHYSICIANS AND SURGEONS OF GLASGOW.—  
At the half-yearly sittings of the Dental Board of the Faculty of Physicians and Surgeons of Glasgow held in October, the following candidates were admitted Licentiates in Dental Surgery : Francis Burton, London ; Clarence C. Hodson, Birmingham ; Alexander Naismith, Glasgow ; Arthur Sutcliffe, Bradford ; James W. Summers, London ; William H. Wheatley, London. Two candidates were referred.

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ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen, having passed the necessary examination, have been admitted Licentiates in Dental Surgery of the College :—Albert Edward Emery, Longton, Staffordshire ; John Westwood, Handsworth, Staffordshire ; and George William Wood, Retford, Nottingham.

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WE are requested to state that it was the intention of the two Scottish Colleges which grant dental qualifications to revise their regulations in the early part of this year so as to provide that dental students should be examined in the fundamental or scientific branches by the Conjoint Board alongside of medical students. The revised regulations were actually in type, and it was only at the last moment, owing to difficulties in equitably adjusting certain details of the scheme, that the two colleges reverted—at all events for the present year—to their original regulations.

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AT the last moment before going to press we have received from Mr. J. S. Turner a letter which touches upon a matter in which everyone of us is personally interested, namely, the exact nature of the immunity from attendance upon juries and inquests which we enjoy by virtue of our Act of 1878. The question has already been decided in the case of the Medical Act, and persons registered under that Act are obliged to see that their names are removed from the “lists,” and the wording of our Act is identical in this respect with that of the Medical Act, therefore it may be presumed that the same duty is incumbent upon us as upon our medical *confrères*, namely, that we should see to the removal of our names from the lists of persons liable to be summoned on juries. The exemption from militia duties and service in parochial township offices is slightly different in character, the final wording of the clause rendering licentiates ineligible to be placed on the list.

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THE new “appliance” department at the Dental Hospital of London, to which we draw special attention elsewhere, figured as an important feature in the recent examination for the Licentiate-ship of the College of Surgeons. The examiners made use of the opportunities afforded by the new workrooms, and successfully inaugurated a new and important feature in the examination for the English licentiate-ship. Everyone who has at heart the perfection of our diploma will hail with satisfaction this extension



of the practical scope of the examination which, so long desired, has been rendered possible by the recent development of this new department. The Committee of Management and the Medical Committee of the hospital will reap the first fruits of their labours (by no means light ones) in this improvement in the efficiency of the examination for the dental diploma, and students will do well to remember that this practical extension of the test examination will be materially increased in stringency in future examinations.

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THE entry of new students this year at the Dental Hospital of London is the largest on record, amounting to forty-nine. At the same time we notice that Charing Cross is the only general hospital whose returns show an increase in the number of entries over last year. The proximity of the two hospitals, and the fact that a large number of dental students receive their general education at Charing Cross, may perhaps explain the increase.

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THE DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students will be held on Saturday, November 29th, at the Holborn Restaurant, under the presidency of Dr. Joseph Walker, L.D.S. Gentlemen, either now or formerly connected with the Hospital or Medical School, who may, through inadvertence, not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Dental Hospital, 40, Leicester Square.

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THE NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students of the National Dental Hospital and College will take place on Friday, November 21st. The Chair will be occupied by Dr. B. W. Richardson, F.R.S., and the dinner will be held at the Holborn Restaurant at 6.30 for 7, and will follow the annual distribution of prizes.

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WE hope our readers will not fail to notice a short letter in our correspondence column of this issue, in which Mr. Turner calls attention to the fact that a limited number of copies of the late Mr. Alfred Hill's interesting history of our profession may be obtained from Messrs. Ash and from the Dental Manufacturing Co., at 5s. apiece (published at 10s.). Not only will those who buy be obtaining a book full of interest to all who care at all for

the story of our early struggles, but they will have the additional satisfaction of knowing that the money so spent will go to the widow of an old and faithful worker for dental reform.

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Mr. DALL's paper on "Porcelain Inlays" will we have no doubt be read with great interest. The excellent photographs which he has kindly provided for the Journal give a good idea of the preparations, but the work itself, which we have, owing to Mr. Dall's courtesy, had an opportunity of inspecting, is exquisitely delicate, and we should think eminently satisfactory to the wearer. One criticism we would make, and that is that the medium, whether gold or amalgam, in which the stoppers are embedded, should be a little thinner and less conspicuous.

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THE first meeting of the Odonto-Chirurgical Society (Session 1890-91) was held in the Rooms, 5, Lauriston Lane, Edinburgh, on Thursday, 13th November, at 8 p.m., Mr. John A. Biggs, L.D.S., President, in the Chair. Private business, nominations. General business, "A Demonstration on Dr. Robert Richter's Glass Inlays," by Mr. Biggs; "Notes on the Demonstrations at the Berlin Congress," by Dr. Williamson.

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WE learn from the *Daily Telegraph* that dentists in Lille are much exercised in their minds at the present moment respecting a decision given in a case where one of their number was defendant before the Correctional Tribunal. A young lady—anæmic, and of nervous temperament—went to him to have a tooth extracted, and for an anæsthetic he dosed her with cocaine. She expired while under its effects. The dentist was then charged with causing her death. He was acquitted by the Tribunal, which, however, fined him 12s for illegally practising medicine, laying it down that anæsthetics could only be administered by properly qualified doctors. The dentists fear that this prohibition will cause them to lose many of their clients—ladies especially—who will not submit to tooth-extraction without the soothing influence of some subtle pain-killer. They demand the repeal of the law refusing to dentists the right of administering any anæsthetic whatever; but it must be confessed that the case in question is hardly calculated to dispose the Legislature to view their contention with favour. One of them complains that according to the Code at present in force "painless dentistry" is forbidden

to practitioners in France unless under the supervision of a duly qualified medical man, a proviso which adds considerably to the cost of tooth extraction.

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LIVERPOOL DENTAL HOSPITAL STUDENTS' SOCIETY.—The first meeting during the winter session of the Liverpool Dental Hospital Students' Society was held on Wednesday, October 14th, R. Edwards, Esq. (President), in the chair, and a large number of members present. The President announced the receipt of a number of valuable books and models from Mr. E. J. M. Phillips. Mr. Morris showed some models of regulation cases. Mr. F. Dopson showed some abnormal molar teeth. Mr. Gilmore then read a paper on "Root Filling," which was afterwards discussed by Messrs. Edwards, Bates, Norris, Osborn, Roberts and Black. After a vote of thanks to Mr. Gilmore for his paper the President announced the next meeting would be held November 19th.

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A CORRESPONDENT from Liverpool sends us a newspaper cutting containing the following remarkable statement:—"Elizabeth Pinnington, aged seventy-three, of Atherton, is cutting a fresh set of teeth. Seven new molars have made their appearance, and the lady has experienced no pain."—It is a great pity that exact records of such cases, together with models, are not placed before scientific societies, so that the accuracy of the statement could be verified.

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WE regret to have to record two more fatalities during the administration of chloroform. The first case occurred at Edinburgh. The patient was a boy of eight to nine years of age. Six teeth were to be extracted—two in the lower and four in the upper jaw. The boy was called in from play and placed on a table with a pillow under his head; his clothing was loose and his chest exposed. The patient having been got under chloroform, the two teeth in the lower jaw were removed. During the extraction of the upper ones the patient struggled and threw himself about; a few minutes after the conclusion of the operation a pallor was observed, and nitrate of amyl and other remedies employed; the breathing continued for about five minutes. Help was then sent for, but before it arrived the patient was dead. The medical opinion was that death resulted from syncope, induced by shock. The boy's

mother was subject to fainting fits. There was no post-mortem. The second case took place at Glasgow; the details have not yet reached us.

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WE quote the following reply to correspondents from the *British Medical Journal* as touching on matters of importance to all practitioners:—

“AGREEMENTS NOT TO PRACTISE.—M.D. writes: ‘Does an engagement on the part of an assistant not to practise within a certain radius, after the expiration of his term of assistantcy, require a properly drawn legal document to make it binding, or does a simple written statement of the conditions of agreement, signed by the assistant, suffice?’ Such an agreement should be in writing, and should be clearly (though not necessarily formally) expressed. The restraint imposed should be reasonable, and the consideration should appear; that is that, in consideration of the benefits (salary, &c.) resulting to the assistant, he agrees not to enter the service of any other medical man, and not to practise, &c., within a given radius. A 6d. stamp will be requisite.”

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WE would call the attention of our readers to an interesting decision which they will find under the head of Legal Intelligence. A person of the name of Cohen endeavoured to avoid payment of fees for professional services rendered on a Sunday, resting his case on the Sunday Observance Act. His honour ruled that a dentist did not come under the Act, and added that the defence was a shabby one; we think no one will hesitate to endorse the verdict.

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SHOW cases are not it seems without their risks. We read that on the 5th of November, at Ludgate Hill, the show cases of Messrs. Eskell and Son were forced, and the contents cleared. The property stolen consisted of sets of artificial teeth on gold and platinum plates, and the time taken by the thief or thieves in performing the work was not more than five minutes.

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WE are requested to state that copies of the “photo,” taken at the Annual Meeting of the Southern Counties Branch at Kingston-on-Thames, may be obtained of Messrs. G. T. Jones & Company, 9, Surbiton Park Terrace, Kingston-on-Thames.

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SIR EDWIN SAUNDERS has accepted the Treasurership of the Dental Hospital of London in the place of the late R. C. L. Bevan, Esq.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

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### Hill's History of Dental Reform.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR MR. EDITOR,— In the year 1877, the late Mr. Alfred Hill published, through Messrs. Trübner & Co., a history of Dental Reform, embracing the principal events of the twenty years prior to that date. Since the death of the author Messrs. Trübner have generously placed the remaining vols. in stock at the disposal of Mrs. Hill. Messrs. Ash and the Dental Manufacturing Company have undertaken to distribute these vols. free of charge to the widow, and copies may be had on application, price 5s. each, just one half of the publishing price. I sincerely hope that all who wish to have at hand a record of the progress of our profession, during twenty eventful years of its history, will secure to themselves this interesting work which, in all likelihood, will soon be out of print. The insertion of this in your next issue will greatly oblige,

Yours truly,  
J. S. TURNER.

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### A Metropolitan Branch.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I have a preliminary list of more than the necessary number of metropolitan members who are in favour of a Branch, and a meeting will shortly be convened for the purpose of asking recognition from the Representative Board.

Under existing circumstances it is difficult, without appealing to the whole body, to discover how many more there may be who would like to assist in the foundation of such a Branch. This, then, is my apology for asking those of my brother metropolitan members who are in favour to intimate the same to me without delay. They will then receive a notice of the meeting.

It is scarcely necessary to point out all the advantages which may be expected to result from the formation of such a Branch; it is only necessary to say that the sole idea is to make the best use of our Association, at the same time avoiding any disruptive tendencies. Instead of some 170 isolated units it would surely be well to have the members brought into closer contact if only for the sake of better

organisation when any important matter arises, such as for instance the question of representation on the General Medical Council, or the Annual Meeting to be held next year.

If such a Branch were recognised at the next meeting of the Representative Board on the 29th inst., there is little doubt but that it could commence work in January, 1891, with a large and efficient membership, including a number of eligible practitioners in the Postal District who have not hitherto identified themselves with the work of the Association.

After the Metropolitan Branch has thus fulfilled its functions for a few years, it may be found convenient to resolve it into subsidiary branches, such as North, South, East and West, but this is a matter which can, for the present, remain an open question. The first step consists in consolidating the Metropolitan members, and I am glad to say that there is every reason to believe that a gentleman bearing a name which will command a loyal support from all, will consent to act as the first President of the Metropolitan Branch of the British Dental Association.

I am, Sir, yours, &c.,

59, *Queen Anne Street, W.*

SIDNEY SPOKES.

### Liability to Serve on Juries.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR MR. EDITOR,—As the following may be of importance to some of our Members, I hope that you will be able to insert it even at this late date. I have just returned from the Probate Court, whither I had been summoned as a juror. I find that Clause 30 of the Dentists Act, making it illegal to return the name of any registered person "in any list of persons liable to serve on the Militia or any such offices aforesaid," does not apply to juries, as they do not come within the designation "offices." It will therefore be necessary for all dentists who do not wish to serve on juries or inquests, to see for themselves that their names are not returned on the jury list (just as medical men have to do), or else when summoned appear before the Court to be excused. This is a rude awakening from a position of fancied security, and so I hasten to save all I can from a like error.

Yours truly,

*November 12th, 1890.*

J. S. TURNER.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

**SPECIAL NOTICE.**—All Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

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THE JOURNAL  
OF THE  
BRITISH DENTAL ASSOCIATION

A  
*MONTHLY REVIEW OF DENTAL SURGERY.*

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No. 12.

DECEMBER 15, 1890.

Vol. XI.

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**The Medical Council and Clause 37.**

THE opening address of the President of the General Council of Medical Education and Registration contained, amongst much matter of more general importance, a paragraph in which Mr. Marshall touched upon Dental business, and made some observations which will, we think, be received with unqualified satisfaction by all the members of our Association, who appreciate at its true value the purity of our Register. Perhaps it will be as well to quote Mr. Marshall's words *in extenso* before offering any comment of our own thereon. They ran as follows:—"Since the last session of the Council thirteen applications have been received in the office for registration in the Dentists' Register, under Section 37 of the Dentists Act, the working of which has recently been regulated by the President, in accordance with the rules laid down by the Executive Committee. Agreeably to a resolution passed by the

Council on June 6th last, these cases have been brought to the notice of the Executive Committee, and have, after consideration, been referred by it to the President with a request that he will investigate each case, and will report the results to the Committee at its next meeting. It will be remembered that the applications just mentioned come under certain exemptions which, as stated in the latter parts of the 37th Section of the Dentists Act, may be made by the Medical Council 'if it sees fit;' and further, that any rules—and, therefore—such rules of exemption—may be 'modified' or 'revoked' under the authority given to the Medical Council by the following Section (38). The exemptions in question, which involve the non-requirement of a special education and examination for a recognised registrable diploma, refer to persons who have commenced their dental education before July 22nd, 1878, and have completed it after that date. It has been resolved, on my own special suggestion, by the Executive Committee to recommend to the Council that on and after July 22nd, 1891—by which time these exemptions will have been in force for thirteen years—they shall be discontinued."

Our readers, especially those of them who have shared the general dissatisfaction with the operation of Clause 37 of our Act (particularly of late years), will hail with delight the news that a term has been put to admissions of this sort, and, while it must not be forgotten that the clause itself was a necessary safeguard to the Bill at the time of its drafting, few will disagree with Mr. Marshall's announcement that a fair time has elapsed—thirteen years—to protect those whom the Act might otherwise have unfairly prejudiced. It is necessary to lay some stress upon this aspect of the case, because it is too often forgotten in the enthusiastic ardour which sometimes endangers a



whole great principle for the sake of a few details, such as time alone can be safely relied on to correct. When Acts of Parliament are passed those who have charge of them stand in need of much tact, forbearance and foresight to reconcile objectors and smooth over difficulties, and it is a very wholesome fact, though sometimes its effects are temporarily tiresome, that the Legislature, when granting penal clauses and prohibitive powers, are very watchful for, and very jealous of, the rights called "vested interests." They very properly decline to disturb, by the operation of a new Act, the class of individuals who, on the understanding of a *status quo*, have embarked capital and labour in a calling without arming themselves against unforeseen limitations, and it is a fact that may not be generally known that the Act of 1878 would have never passed into law had not the rights of such individuals been duly safeguarded. Thirteen years, however, is a sufficient space of time to allow ample opportunity for all who could justly claim the benefits of exemption conveyed in Clause 37 to avail themselves of this means of ingress to the Register, and we congratulate the President upon his decision to suspend the further operation of the clause after the July of next year. Section 38 gives full powers to the Council to modify or, if need be, to revoke, any rules, so that there is no technical difficulty in putting a period to the operation of the clause.

We would urge our members to rely upon the same slow but certain agency of time to remove one by one all the anomalies that may seem at the present moment to favour the diplomaless practitioner, resting happy in the conviction that it will not be long before the Register will contain but few names that have not been enrolled there by virtue of a diploma gained by a thorough and searching examination.

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## ASSOCIATION INTELLIGENCE.

### A Metropolitan Counties Branch.

A MEETING of Metropolitan members was held at 40, Leicester Square, on Friday, November 28th, at 8 p.m., for the purpose of forming a branch of the British Dental Association.

Mr. J. Howard Mummery was voted to the chair. He explained the objects of the meeting, and read No. 27 of the Articles of Association and Bye-law No. 29, under which it was proposed to take action. A letter had been published in the last number of the JOURNAL, and since then a notice of the meeting had been sent to every Metropolitan member who had not already sent in his name. Mr. SPOKES read letters from gentlemen who were unable to attend the meeting, and also a list of those who, previous to the meeting, had expressed their willingness to belong to a Metropolitan Branch.

The objects of the proposed Branch were read as follows :—

1. The consideration of all subjects affecting the interests of the profession.
2. The reading and discussion of papers on dentistry, as well as the conducting of practical demonstrations.
3. The promotion of friendly intercourse and good-fellowship amongst those practising in the Metropolis.
4. To render assistance, as far as possible, in carrying out the Dentists Act.

A formal resolution was carried—"That a Branch be formed."

Mr. Charles S. Tomes was elected, with acclamation, as the first President, and shortly afterwards took the chair for the rest of the meeting. Mr. J. Howard Mummery was elected President-elect; Mr. C. J. Boyd Wallis was elected Treasurer; and Mr. Spokes Secretary.

The Secretary read a list of suggested Bye-laws similar to those in force in other branches. Messrs. S. J. Hutchinson and Lawrence Read, and Dr. J. Walker, together with the officers of the Branch, were appointed a Committee to draw up the necessary Bye-laws. Two other resolutions carried were: "That those members of the Association who have signified their wish to belong to the Branch are hereby declared to be original members of the Branch." "That the Secretary apply for recognition of the Branch at the next meeting of the Representative Board." The list of original members contains over sixty names.

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## ORIGINAL COMMUNICATIONS.

## Root Filling.

BY HENRY SEWILL.

UPON the subject of root-filling, if the expression of opinion be confined to principles upon which practice ought to be based, it is tolerably safe to generalise or even dogmatise. But when we come to discussion of the practical details of treatment in different cases, there appears ample excuse for that considerable divergence of opinion which undoubtedly exists.

The preliminary treatment of diseased roots is a separate subject to which I may have to refer later, but into which I need not at the outset enter. Given roots in a condition ready for filling, we shall hardly find any dissidence from the statement that the treatment should consist in filling and hermetically closing the canals by some method which will ensure their maintenance in that perfectly aseptic condition into which the preliminary treatment has brought them. The subject then resolves itself mainly into a question of filling materials and the method of using them, for although one material may be ideally the best for every case, many instances must occur in which, if only because of operative considerations, some other will be preferable. Take the case of gold. If I were asked to name the six most difficult operations in dentistry, I should certainly name as one of the six the operation of filling with gold—hermetically closing with an impermeable gold plug—the canals of molar roots. This is an operation which I have not attempted since the earliest days following my emergence from pupilage. In those days, now more years ago than I care to count, I was, as a tyro, naturally anxious to adopt the teaching insisted upon as best in the current text books, and these mostly gave gold as the best material for root-filling. This was long before the principles of antisepticism were formulated. I, however, very soon abandoned my attempts, except in the case of single-fanged teeth, for the simple reason that I found the process far beyond my operative powers.

In discussing methods of operating, the question here broached—the “personal equation” in relation to operative capabilities—must not be overlooked. Among the mass of practitioners, how many are there on the average to whom the labour of filling with gold the irregular, perhaps abnormal, roots of a back tooth will

not appear a sore task—a task the difficulties of which increase in proportion as the tooth and cavity of decay are less easy of access. Those possessing the highest talent for operating—endowed with that touch of genius which distinguishes the born operator from his less favoured brethren—cannot perhaps in viewing such a question put themselves in the place of individuals who, like myself, are totally devoid of any such endowment—individuals upon whose powers performance of the more difficult operations always inflicts a severe strain. The less gifted operator on the other hand can hardly keep clear of bias, and is doubtless prone, without sufficient grounds, to lay the flattering unction to his soul that his mode of procedure is, after all, not only easiest of performance but best also for the patient. This personal question must be considered in gauging the value of opinions, and it accounts for, if it does not excuse, the tone of apparently narrow dogmatism in which writers of different temperament and capability are apt to express themselves on such questions.

Even by the most gifted operator, one to whom the execution of difficult and prolonged procedures appears more like a pastime than a task, it will, I take it, be conceded that of alternative methods equally good, that should be chosen which involves least labour, and as there are several equally good methods which in my judgment possess this advantage, I consider on these grounds alone root filling with gold is to be condemned. Several practical and theoretical objections may be besides urged against the use of gold. Except in the case of some incisors and canines with normal roots presenting straight canals large enough to admit wire root-pluggers, the instances are rare in any tooth in which, where gold is used, considerable drilling or broaching of canals will not be necessary.

Consider first the labour and difficulty which this involves. It is next to impossible to pass beyond a sharp curve with a flexible drill, and the burring-engine. But as it is imperative to open the canals to allow passage of gold, this must be in many instances done partly by hand with fine flexible spring-tempered broaches. Is there not great risk of perforating the root in this part of the process, and does not the broaching often dangerously diminish the often slight thickness of dentine which protects the underlying cement with its vascular connections—structures easily excited to inflammation by external irritation. A gold root-filling, not impermeable, could hardly be considered satisfactory ;

but such a plug can scarcely be constructed without free use of the mallet. Is not the concussion of malleting likely to be followed by inflammation? Then, suppose a perfectly welded and consolidated gold filling applied, is not the material different as far as can be in physical character from the pulp which it replaces: and do not its rapid heat-conducting properties alone render it an extremely unsuitable substitute? I do not dwell upon the difficulties of maintaining a perfectly aseptic condition with this material—they seem obvious. Finally, in the event of acute periostitis supervening, the removal of gold root-plugs is next to impossible. Similar objections apply to amalgams and all metallic fillings, although least of all to tin.

From my own point of view—a view probably governed unconsciously by the limitation of my operative powers, to which I have sufficiently referred—I should say an ideal root-filling would be one which could be easily applied with a minimum of preliminary operative interference; which should approximate in physical characters to the tissues of which it takes the place; which should maintain the canals in a permanently aseptic condition, and which should be easy of removal on occurrence of untoward symptoms. The nearest approach in every respect to this ideal is, in my judgment, to be found in absorbent cotton-wool imbued with a powerful antiseptic, and the antiseptic which I now prefer is perchloride of mercury.

In my early days of practice I used cotton with fluid oxychloride of zinc cement, a powerful antiseptic, but when used for this purpose subject to a disadvantage familiar to all—its liability to excite periostitis. There are two grave objections to oxyphosphate as root filling; first, these cements are so sticky and cling so tenaciously to wire root fillers that even when used thin and with cotton fibres they cannot, without difficulty, be carried down beyond the entrance of small tortuous canals; second, they possess little, if any, intrinsic antiseptic properties. Next I used cotton wool with carbolic acid—soaked in acid and then pressed as dry as possible; later I employed wool with eucalyptus oil and iodoform; with each of these very satisfactory root fillings may be made. The first advantage of wool filling is that it can be conveyed to the depths of any canal which will let pass a (Donaldson's) steel bristle, and unless to perforate or remove obstructing secondary dentine the drill is rarely or never needed in the canals. And here I may remark that I am also strongly of opinion that the

cases are exceptional in which drilling of root canals is called for as a preliminary measure—to bring them into an aseptic condition—even when their walls are to some degree softened and putrid. The dentine walls of canals in this condition treated with absolute alcohol can be dried and imbued with an antiseptic and brought by a few dressings safely and certainly into a condition fit for the reception of a filling. The effect unquestionably may be more rapidly brought about in some instances with the aid of the drill, but the gain of time hardly outweighs the unnecessary danger introduced.

It is no doubt because I have done so little in any other way to promote the advance of dental practice that I take some pride in recurring to the fact that it is to me the profession is indebted for the introduction of absolute alcohol. This was brought forward in a communication to the Odontological Society in the year 1874.\* The employment of alcohol in dental operations was suggested to me by its use in microscopy, in which I was at that time much engaged. Using it in desiccation of sections of bone and dentine, it occurred to me that it might be turned to a similar purpose in practice, and I accordingly began at once to make use of it in drying cavities. The results of my first satisfactory experiments in this direction were mentioned in the communication referred to. This was in the early days of bacteriological science and before Listerism or asepticism was made a system of practice, and it was not till later that I became aware of the powerful antiseptic properties of the fluid.†

Absolute alcohol has a powerful *chemical* affinity for water, so that it is not only capable of taking up surface moisture, but also of abstracting fluid which tissues intrinsically contain, or with which, in process of decomposition, they have become imbued. Absolute alcohol of commerce, although a very potent agent for

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\* See Transactions of the Odontological Society, new series, vol. vii.

† Testimony to the antiseptic properties of absolute alcohol—very suggestive with regard to root-filling—is borne in the following paragraph from Dr. Koch's recent paper on the treatment of tuberculosis: "For this purpose [*i.e.*, subcutaneous injection of anti-tuberculous lymph] we have used exclusively the small syringe suggested by me for bacteriological work; it is furnished with a small india-rubber ball, and has no piston. This syringe can easily be kept aseptic by absolute alcohol, and to this we attribute the fact that not a single abscess has been observed in the course of more than a thousand subcutaneous injections."

practical purposes, is not perfectly free from water, for it takes water at once from the atmosphere on exposure. In order to preserve it at full strength the alcohol needs therefore to be kept in close-stoppered bottles. In use it is best to put out a small quantity for each case, and guard that as much as possible from access of the atmosphere.

If I were inclined to dogmatise, I would lay it down as a rule to which no exception could be allowed, that whenever a bristle can be made to penetrate carrying a few shreds of wool with absolute alcohol through the length of a root it is never necessary or expedient, whatever the condition of the root walls may be, to use a drill preparatory to root-filling. With free use of alcohol, aided by the hot-air syringe, softened dentine may be perfectly dried throughout. It is probable that this process of dehydration alone would suffice to leave the roots in a perfectly aseptic condition, but reliance is not placed upon this alone. Perchloride of mercury is used in solution with the alcohol, and the process is repeated at intervals over a period prolonged in accordance with the severity of the case. There can be no doubt the perchloride follows the alcohol wherever it penetrates the substance of softened dentine, entering dilated tubes and effectually sterilising the carious tissue. The alcohol on evaporation leaves the perchloride as an impalpable powder impregnating and covering the canal walls. Although I have not tried the experiment, I do not doubt that canals left in such a state unfilled, but having of course their apical foramina and their pulp-cavity orifices sealed, would remain permanently at rest; but I do not trust to this. The canals are always plugged as tightly as possible with absorbent cotton carried in wet with solution of perchloride in absolute alcohol, and dried by the hot-air syringe as the operation proceeds. A solution of 1 per cent. is not too strong for this purpose; one in one thousand is sufficient in preliminary treatment.

There seems no room for doubt that the most dangerous condition in which a canal can be left is that in which a portion of pulp remains attached to the connections which extend through the foramina to the periosteum. The danger is less when the portion of pulp is dead, than when it retains its vitality, but continues until the slough is separated and isolated. It is highly desirable that no shred of tissue should be left even in the latter condition, although after exposure to action of alcohol and per-

chloride such shreds will be so shrivelled and sterilised that they must be virtually no longer a source of danger buried amidst an antiseptic packing.

With regard to closing or sealing apical foramina by an impervious plug, I am inclined to think that this is much less often necessary than sometimes seems believed. I am now speaking, of course, of cases in which suppuration, if it have been active around the end of the root, has been previously cured—cases in which the apex is covered by healthy tissue, and in which neither abscess nor fistula exists. As a rule, closure of apical foramina is not necessary in adult teeth in which extirpation of a recent pulp has been performed. It is likely to be needed in immature teeth (during childhood and youth), and in cases where chronic periostitis, accompanied by necrosis or absorption, may have led to enlargement of the naturally minute openings. Many cases of chronic periodontitis are, however, accompanied by exostosis, and in most of these cases the foramina are made less permeable than in their normal state, by the deposit of new tissue. In any case the existence of an enlarged foramen can only be ascertained by examination.

After careful exploration by means of a wire probe or bristle, if enlargement of a foramen is only suspected, not proved, it is better to err on the right side and to close it impermeably. This is not a very difficult process in large accessible canals as in front teeth, and the palatine roots of upper molars. The difficulties begin with canals of small calibre and tortuous, and here the temptation to freely use the drill is often great, but in my opinion ought to be resisted. The pulp-chamber orifice may be, however, freely opened and enlarged to a moderate depth in every case. The best material for the apical plug is, I believe, phosphate cement, used very thin and carried in with the fewest possible fibres of absorbent cotton well worked into the cement in mixing. The difficulty is to carry down the plug to the depths; it tends to clog and block the canal, and the procedure calls for patience and nicety in manipulation. Bristles and pluggers should be bright, and they may be smeared with vaseline to prevent adhesion of cement. In some cases a thin rolled-out filament of Jacobs' gutta-percha may be used. This is carried in by plugging forceps, and coaxed along to the depths. Its passage may be facilitated by first moistening it with chloroform. When nearly in position, a minute quantity of chloroform may be conveyed to it,



and then by means of cotton wool—the first portion of the antiseptic filling—the small softened mass may be gently forced to the desired point.

A similar process may be carried out with shellac, but in this case absolute alcohol (which may be charged with sublimate) must be used instead of chloroform. In roots of large calibre an apical plug may often without difficulty be made with copper amalgam. It should be used thin and pressed home towards the last with cotton wool. Copper amalgam is extremely plastic and has antiseptic properties which render it superior for the purpose to either gold or tin, which are, however, not difficult to apply in a certain limited number of instances. The pulp-cavity ends of canals are best closed with phosphate cement. This is easiest conveyed mingled with cotton fibres. The fibres are readily packed deeply in, and the semi-fluid cement which exudes remains and sets, forming a perfectly impermeable plug. Gutta-percha is not so suitable for the purpose, being much more apt to undergo decomposition in this situation than when constantly kept with a moistened surface, as in an ordinary filling.

It has become somewhat the fashion lately to speak of a certain plan of treatment under the designation of "immediate root filling." This term is especially applied to cases in which canals, after sterilisation, are permanently filled without prior treatment of conditions of disease—usually chronic inflammation and suppuration—existing around the root. The term does not seem a particularly happy one, nor does it properly differentiate cases; for it has been always the practice, when convenient, to fill roots immediately upon removal of a recent pulp. But in all cases of the kind, whether the foramina be or be not of normal size, it would seem imperative to close them in the most effectual manner; otherwise exudations or pus bathing the extremity of the root would certainly be taken up by a wool filling. So-called immediate root filling is no doubt a useful procedure in selected cases, particularly where time is an object; but it seems to me obviously better, whenever practicable, to bring about by preliminary treatment a healthy condition in the vascular surroundings of roots, and to cause abscesses or fistulous tracts to heal and solidly close.

Statistics of operations to be of use would need to be more extensive than it is in the power of most dental practitioners to collect. A considerable number of patients having undergone root-filling are never seen again by the same operator, and it is of

course impossible to prove that this proportion of cases is not mainly made up of just those which have failed. A case of root-filling which has gone on without evil symptoms for a year or two—the first few months are really the test time—may be considered a success, there being no reason why such a case should not continue after that for an indefinite period. I have collected no statistics, and I will only say I am satisfied with the treatment of which I have now given an outline. We are all agreed, I believe, as to the principles of antisepticism upon which treatment should be based. The operative method which I have briefly sketched, has in my hands given excellent results in numbers of instances which I have been enabled to keep under observation for sufficiently prolonged periods, or which have returned after lapse of years. I believe the method is entirely in accordance with theoretical considerations, is the least difficult of all to carry out, whilst not less than any is it conducive to the preservation of the teeth, and to the permanent advantage of the patient.

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### Electricity in Dental Operations.

By L. BURGOYNE PILLIN, L.D.S.Eng.

At the dinner of the past and present students of the National Dental Hospital and College, on the 21st ultimo, the President, Dr. B. W. Richardson, mentioned most favourably the new dental vibrator, and a perfectly painless operation he witnessed me perform on the morning of that day.

As the introduction of this method of extraction must necessarily be of interest to my professional brethren, the following brief explanation and few facts may not be unacceptable.

The invention was introduced into this country by Dr. Babcock, of Maine, U.S.A., in August last. It is proprietary, being the monopoly of a company which has patented it all over the commercial world, the English patent being in the hands of an eminent firm of engineers in the City of London. It consists of a direct current derived from a small Rhumkorff coil; made of extremely fine wire—about a mile, I am informed, of No. 40 B.wg.—with a very delicate and highly strung armature, strained by a clamp and screw at either end, giving it great sensibility and immense rapidity. The energy is derived from a two-cell battery of the ordinary bichromate form, the poles being formed of com-

*pressed* zinc and carbon. In consequence of the high tension of the armature spring the titillations are so quick that the vibratory broken sound is lost, and is resolved into a special note, that note being *tuned* to the philharmonic orchestral "A"—*ergo*, 452 vibrations to the second of time. These vibrations are conveyed to two electrodes—negative and positive; the *positive pole being divided*, presenting in appearance what at first sight seems to be a *third pole or terminal*, which practically is impossible. For the operation of tooth extraction the *modus operandi* is as follows:—The patient being adjusted in the chair to the best advantage for the operator with regard to light, height, angle, &c., &c., the negative electrode is taken in his or her left hand, the positive in the right, and the current allowed to run gently for a few moments; it is then increased till it becomes somewhat unpleasant, when it is immediately cut off by a switch governed by the operator's foot. The cable from the *apparent third pole* is then attached to the forceps, and everything advanced as much as possible for the extraction. The subject is then impressed with the importance of holding well on to the electrodes. All being right the current is then let on and the extraction proceeded with in the ordinary way; no hurry need be exercised, as the patient will feel nothing of the luxation of the tooth, or any pain whatever. Immediately on removal of tooth the switch is re-applied with foot and the matter is at an end, and a painless operation the result. The high initial tension of the electric current is so rapid, and the deflection of the third contact so great, that no sensibility is felt in the part operated on.

My experience, since taking the matter up, and after exhaustive experiments, is most satisfactory—of nearly 250 extractions (up to time of writing) not a single failure has occurred. The only semblance of anything untoward, was that of a young woman, in a highly hysterical condition at the time, who relinquished the hold of the negative electrode at the moment I told her to hold on. This was witnessed by two celebrated hospital surgeons, who of course agreed that it was no failure of the instrument or its application. One lady, after having five stumps removed by this method insisted on having ten more extracted, and afterwards assured her husband and me that nothing but "pins and needles" in the hands was felt.

The effect is not that of an anæsthetic or an annulgent, but an extremely rapid divertant, and its utmost power less than *one volt*—

a quantity so insignificant as to be perfectly harmless. As before stated, the instrument and its working is a patent, and before long will be before the profession.

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## LEGAL INTELLIGENCE.

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Dale Street, Liverpool.

WILLIAM LADYMAN, dentist, Liverpool, was summoned at the instance of the Commissioner of Excise for keeping a male servant without a licence.

Mr. Mackney appeared for the Commissioners.

The facts were that the servant in question was a page boy employed to open defendant's door and run errands, and it was urged that the former part of his service was taxable.

Mr. BARNES, who appeared for defendant, claimed, however, that as the boy did not sleep in Mr. Ladyman's house, the case came within the exemptions granted by the Revenue Act of 1876.

The Bench decided against this contention, and imposed a fine of 10s. and costs.

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## REPORTS OF SOCIETIES AND OTHER MEETINGS.

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### Odontological Society of Great Britain.

THE ordinary monthly meeting of this Society was held at the Society's rooms, 40, Leicester Square, on December 1st, Mr. FELIX WEISS, L.D.S., President, in the chair. Present, a good attendance of members and some visitors.

Mr. R. W. Rouw having signed the obligation book was admitted a member, and Mr. W. John Fisk was elected a member, while Messrs. T. W. Harris, H. L. Albert, A. W. W. Baker were nominated for membership. The Curator, Mr. STORER BENNETT, stated that some ancient instruments—forceps, elevator and a key—had been presented to the Society's Museum.

Mr. TRUMAN narrated a case of eruption of the left permanent lower canine below the chin. The patient, a girl aged six, had between three and four years ago suffered from diphtheria. During her convalescence a swelling had been observed over her jaw; a doctor extracted two teeth and a good deal of pus escaped; a sequestrum subsequently came away. Some pustules formed under the chin, and upon their bursting

sinuses remained, portions of bone escaping from these ; later on the sinuses, with the exception of one, healed up, and in the one remaining the tooth was erupted. Mr. Truman cited examples of somewhat similar conditions recorded by other observers.

Mr. STORER BENNETT mentioned a specimen in the Museum of a prehistoric skull of a child, in the lower jaw of which was a partially developed canine inverted, but not having pierced the jaw.

Mr. MORTON SMALE stated that three or four years ago a patient had presented himself at the Westminster Hospital with a permanent canine tooth erupted into the nostril.

Mr. F. NEWLAND-PEDLEY had removed a canine tooth through the nostril ; patient suffered from hare lip ; and Mr. W. HERN had met with a similar case.

The PRESIDENT cited a case in which two canines lay horizontally in the jaw ; they were perfectly formed.

Mr. F. J. COLYER presented a model of a mouth showing a canine erupted underneath the tongue.

Mr. WOODRUFF mentioned two cases occurring in his practice—in one a canine was growing in a horizontal position on the outer portion of the arch, and the other quite upon the palate.

Mr. J. O. BUTCHER showed a device as a substitute for and improvement upon the spring catch of the hand piece of the dental engine, and Mr. J. ACKERY spoke in its favour.

Mr. MORTON SMALE described and showed two obturators, the invention of Dr. Brandt of Berlin. One was for use in cases of congenital cleft palate, the other in cases of unsuccessful staphylorrhaphy. The principle was that of a small india-rubber bag attached to an artificial palate ; the bag was inflated after insertion in the mouth.

Dr. RICHARDSON then read a paper, "On the Causes of Hæmorrhage after Tooth Extraction and the Immediate Treatment." He divided the subject into two parts, namely, cause and treatment.

A long experience had convinced him that the accident of hæmorrhage after extraction of the teeth is much less frequent than it was twenty-five years ago. Although he never had a case which ended fatally, two or three had approached very near to a fatal termination ; and deaths have occurred from this cause. This lessened frequency of death from hæmorrhage after tooth extraction is partly due to the improvements in the methods now in vogue for tooth extraction, and those adopted in treating the hæmorrhage, but largely, Dr. Richardson thinks, to the lessened number of cases of hæmophilia or bleeding diathesis, which is due to improvement in the blood of the nation following the adoption of sanitary measures.

#### CAUSES OF HÆMORRHAGE.

There are three distinct conditions leading to dangerous hæmorrhage after extraction of teeth : (a) abnormal fluidity of blood—purpuric

hæmorrhage; (b) deficient contractile power of the divided vessels—vascular hæmorrhage; (c) mechanical lesion favouring the flow of blood—mechanical hæmorrhage.

(a) *The Hæmorrhage from Fluidity of Blood.*—The examples of this fall into two classes—the *aqueous* and the *scorbutic* or *saline*.

The summary of this condition runs as follows:—There is usually a history of hæmorrhage of fluid blood caused by very slight wounds and restrained with difficulty. There is a history either of hereditary disposition to the disease, or of its induction by some nervous shock or injury. The blood is very fluid, and non-coagulable. The blood corpuscles are large, and deficient in central depression. The specific gravities of the blood and of the urine are low. The eruption on the skin is not a persistent symptom, and resembles a bruise, without swelling or hardness. The blood does not exude through closed vessels, but it easily flows from a wounded point, *e.g.*, prick or a leech bite.

Unfortunately it often happens that no such preliminary history is supplied. He cited two illustrations of typical cases. In one, the patient was a man of middle age and full habit; he came to have a loose wisdom tooth removed. The tooth had three small fangs, the anterior one the largest. The hæmorrhage, not more than usual, stopped before the patient left the house, the alveolus being plugged with lint wetted with camphorated spirit of wine. Later in the same day he called again on his doctor, the blood flowing in full stream from the alveolus. Plugging with lint and firm pressure with a cork was now adopted, together with the use of an astringent lotion; the bleeding was staunched. The patient now informed the doctor of his history, viz., that he had had a tooth taken out before, considerable hæmorrhage, lasting for three days, ensuing. One day later the doctor was sent for and found that the bleeding had continued all night, and that there was neither clot in the alveolus nor in the blood which was spat out. Caustics and solutions of lead and alum were now applied with benefit, and for an hour all appeared safe. Later the actual cautery was applied; this and other means failed. Blood still oozed freely for several days. Attempts to check the bleeding were vain until two days later when the loss was more severe, and indications of syncope supervened. Towards the evening there was some improvement, the hæmorrhage being under control by simple pressure; next day there was sinking, and although the hæmorrhage from the alveolus had ceased, there was hæmorrhage from the gums and from the left nostril. Death put an end to this case three weeks and two days after the operation.

In the second case a young lady between sixteen and seventeen years of age had an upper molar tooth on the left side extracted. The extraction was easy. The subsequent hæmorrhage soon ceased of itself. The tooth was extracted about midday, and all went on well

until the evening, when, during the excitement of dancing, blood began to flow from the alveolus. The loss of blood continued for many hours, until dangerous signs of exhaustion supervened. Dr. Richardson being called in plugged the alveolus firmly with styptic colloid on cotton wool. Three nights afterwards, during sleep, the patient, by mere accident, moved the plug in the alveolus, when once more there flowed forth the fluid blood. Again during semi-syncope the bleeding surface was sealed with the same kind of styptic stopping, and the surface healed without the recurrence of hæmorrhage.

The second form of purpuric or hæmorrhagic blood was called the *saline* type. The summary of this condition runs as follows:—There is no necessary history of hæmorrhagic or fluid blood, nor yet of hereditary disposition to such hæmorrhage; but there is always a history of an induced morbid condition from error in diet, exposure to some noxious agent, or disintegration of blood from disease. The blood is fluid, but from it fibrine separates, and the corpuscles are shrunken and crenated at their edge. The specific gravities of the blood and of the urine are high. The tendency of the blood in these cases is to exude from the soft spongy surfaces, as from the gums; and if an eruption present itself, it is in the form of maculæ or petechiæ. Transudation of blood by the mucous secretions is not an uncommon diagnostic fact of this type of purpura. Venous murmur is also not uncommon as another point of diagnosis.

(b) *Vascular hæmorrhage—hæmorrhage from deficient contractile power of blood vessel.*—There are three or four classes of persons who suffer from hæmorrhage of this character on slight causes. In the largest class a slight physical accident on the body is apt to produce a discoloured spot or bruise with swelling, and after a time firmness of structure at the point of the swelling. These subjects are usually well nourished and young. They are disposed to be fat, and if they are carefully inspected while undressed they are found to possess some deformity of body more or less marked. The spine will show a slight curvature, or a lower limb will be a little distorted, or the chest will be badly developed or misshapen. The blood may, however, be perfectly natural, and there may be no hereditary hæmorrhagic diathesis. If a little blood be drawn for examination, it is found to coagulate quickly and firmly. The colour of the blood is natural, and the corpuscles are of normal size and outline. There is, in fact, no definable disease of the blood.

In other examples of this type of hæmorrhage, the patients are what is called anæmic or bloodless. The clot formed by their blood may be loose and yield a large exudation of water, but it coagulates in sufficient degree to staunch bleeding.

In a third class of vascular hæmorrhage alcohol is mainly the cause. The subjects are generally in the middle period of life, and present all

the evidences of alcoholic constitutional change—the vascular cheek, the excitable, feeble heart, and nervous uncertainty.

A fourth class are victims of specific disease, the influence of which on the structure of blood vessels is marked.

In all these varieties the blood may retain its power of coagulation. Either the minute vessels are paralysed, or there is some degeneration of structure in them.

*Mechanical Hæmorrhage, i.e., hæmorrhage from lesions favouring the flow of blood.* These are lesions due to accident connected with the operation, fracture of alveolus, or tearing away a portion of alveolus.

Upon the question of treatment, Dr. Richardson said in the first place it is essential to ascertain if the blood that is being lost is or is not coagulable. If the blood is coagulable—if a firm clot forms in the course of two or three minutes—much cause for alarm is removed, as the cause is purely mechanical, there being either failure in the contraction of the bleeding vessels, or adhesion of the bleeding vessel to the surrounding bone tissue, or rupture of an abnormally large vessel.

*Treatment specially applicable to vascular and mechanical hæmorrhage.*—This treatment includes three methods: (1) the styptic; (2) the plug with pressure, with or without styptic; (3) the cautery;

Nitric acid is the best styptic according to Dr. Richardson, but has the disadvantage of being very difficult to manipulate. Styptic colloid, tannin collodion, with addition of tincture of bezoin, for ordinary cases has no superior. The colloid can be applied on cotton wool and a firm plug of it can be inserted with much felicity. When this does not seem sufficient perchloride of iron may be applied, in solution, with cotton wool. These simple methods failing, the second plan, that of the plug with pressure, should be tried.

Three kinds of plugs have been used. One is made of soft, well-teased cotton wool saturated with styptic colloid. The mass is not put in in too moist a form, but mixed in a cup is allowed slightly to dry by the evaporation of the ether. Then, after well drying the bleeding cavity with a pledget of lint, the colloid cotton is inserted with forceps, the point of which has been dipped in olive oil, layer by layer, as in a process of roughly stopping a tooth, until the cavity is completely filled. A little bit of dry wool is next made to cap the whole, and pressure is made with the finger or with Harding's compress until the plug is solid, which, owing to the escape of ether, is rather a quick process.

A second plan is to use a perchloride of iron plug made by saturating cotton wool with solution of perchloride of iron, and then driving the cotton down.

But the best plug of all is a gutta-percha styptic plug. It is very convenient, and is easily kept at hand for an emergency. The plug consists of gutta-percha discs, each disc saturated with styptic, tannin or perchloride of iron. One of these discs, picked up by the forceps



and held for a short time in hot water, softens and becomes so malleable that it can be inserted into any cavity. The bleeding tooth cavity is quickly dried with absorbent cotton wool, and is then filled with the plastic styptic, pressed firmly down to the bottom and held there until it becomes firm. There is no fear of putting in the plastic styptic too hot, since heat favours coagulation.

*Treatment of Purpuric Hæmorrhage.*—The same lines of treatment are required for cases of mechanical hæmorrhage, in which the blood is naturally coagulable. When the blood is deficient in plastic quality, and presuming that the blood flowing from the injured part shows no tendency to clot and is discharged in a steady stream—which is not arrested by pressure or the ordinary application of styptic—it is necessary at once to produce secondary or albuminoid coagulation. Tannin and styptic, perchloride styptic and the subdued actual cautery are here applicable. It may be well always to try the two first-named styptics, and in the perchloride gutta-percha styptic and in the tannin styptic to some extent we have substances which will coagulate albumen, even when they are not heated, and will instantly coagulate if heated to 150° Fahr. These, therefore, are very ready in emergency. If they fail no time should be lost in resorting at once to the cautery. When the electric cautery is at hand it is the most convenient; it does not alarm the patient, and the heat of the terminal probe is sustained in the cavity; but if not at hand the next best is the small iron cautery, an iron bulb terminating in a fine long point and fixed in a strong handle at an oblique angle. This bulb and point can be made red-hot in the flame of a spirit lamp or of a gas jet. It may be allowed to cool down until all redness has disappeared, and can then be inserted deep down into the bleeding cavity. Should it fail there is no other direct local pressure that can be depended upon. Even ligature of the carotid would be a doubtful measure.

The cautery should never be used at such a heat as to destroy structure. The coagulating power of heat over albumen, viz., 140° F. is all that is required strictly, but this may be safely exceeded to 50° or 60°.

In cases of hæmorrhage, wine, brandy, or some other alcoholic stimulant to the patient is often given under the false idea of sustaining the vital power; this practice is on the strictest and purest scientific grounds wrong. The action of alcohol, under such circumstances, is injurious all round. It lessens coagulability, increases heart action and so favours bleeding, and produces restlessness and excitement. In hæmorrhage the very keystone of success lies so much in quietness of the circulation that actual failure of the heart, up to faintness, is an advantage; it brings the blood at the bleeding point to a standstill, enables it to clot firmly, when it has that tendency, and form the most effective possible check upon the flow from the vessels. The recumbent posture should be adopted when signs of faintness

supervene, and so long as the patient can swallow, warm milk and water may be given.

In summary, the leading points of the lecture put forward were that hæmorrhage from tooth extraction is due to one of three sets of causes : (1) to purpuric or fluid blood of which there are two varieties ; (a) the aqueous, (b) the saline ; (2) the vascular from weakness or paresis of artery, occurring in constitutions (a) strumous or scrofulous, (b) anæmic, (c) alcoholic, (d) syphilitic ; (3) the mechanical, the result of extensive mechanical injury.

In the treatment of hæmorrhage of the second and third class, a styptic treatment with pressure is that most immediately useful, the best styptics being tannin and perchloride of iron, either of which may be applied by means of the styptic gutta-percha disc. In the treatment of vascular hæmorrhage secondary or albuminoid coagulation must be induced, for which the subdued actual cautery is necessary. In all cases alcoholic stimulation is inadvisable.

The PRESIDENT, having expressed the satisfaction the Society felt at the presence of Dr. Richardson,

Mr. THOMAS ARNOLD ROGERS remarked that he had on several occasions been glad to avail himself of Dr. Richardson's special knowledge of hæmophilia.

Mr. NEWLAND-PEDLEY had listened with interest to the paper ; he did not hesitate to operate upon bleeders, even when he knew their history. In inveterate cases Mr. Newland-Pedley advocated general treatment with iron salts and rest in the recumbent posture to be persevered in for some time before operation.

Mr. WALTER COFFIN agreed with Mr. Newland-Pedley, if that gentleman's remarks were intended to convey the meaning that bleeders should be treated at their own homes.

Mr. STORER BENNETT suggested that the teeth of bleeders should be removed by fastening a ligature round them and tightening it each day, so as to force it up the tooth. This in time caused dropping out of the tooth without any hæmorrhage. He had found peroxide of hydrogen useful as a hæmostatic in some instances, but it was not always efficacious.

Mr. WOODHOUSE believed one reason for the less frequent occurrence of hæmorrhage after extraction of teeth at the present day was the great increase in the supply and consumption of fresh fruit, which had lessened the prevalence of scurvy. Reverting to the treatment of bleeding after tooth extraction, Mr. Woodhouse said he used styptic colloid in conjunction with carbolic acid, the latter acting as an anodyne. The tooth socket should be filled with small wisps of wool steeped in this and carefully packed. Too great pressure was deprecated, and it was recommended to remove the saturated wool after a few hours, to prevent inflammation and subsequent bleeding.

Mr. DAVID HEPBURN would discountenance the use of strong

remedies as he believed they acted prejudicially upon the gums and produced the evil they were intended to check. He advised that an impression of the mouth should at once be taken and then the application of a splint, which should be a permanent one. A splint of vulcanite could be, by modern methods, turned out in 1½ hours.

Mr. J. S. HUTCHINSON said there was no doubt that when the existence of the hæmorrhagic diathesis was known preliminary treatment was useful, but unfortunately the history was seldom told until after the extraction had taken place. He advocated the use of pressure upon the bleeding surface by means of lint, held in position by a ligature tied round adjacent teeth. Amadou used in the same way was of use, and it was a good plan to fix it in position by drawing the silk through it before securing it to the teeth.

In replying Dr. RICHARDSON said he was gratified to find remedies of which he himself was the author, viz., peroxide of hydrogen and styptic colloid, so well spoken of. Mr. Storer Bennett's failure in some cases with the former was easily explained. The peroxide of hydrogen was not in itself a styptic, but when prepared with acid, as it was sometimes, the acid which adulterated the sample would act as a hæmostatic, while the pure specimen would fail. In reference to Mr. Newland-Pedley's remarks, Dr. Richardson said he had purposely refrained from reference to general treatment as falling outside the range of his subject, but he might remind Mr. Newland-Pedley that physicians were well aware that the perchloride of iron was of little value in the general treatment of many forms of the bleeding diathesis. The suggestion of Messrs. Woodhouse, Hutchinson and Hepburn were certainly excellent.

The usual votes of thanks having been passed, the PRESIDENT announced the Annual General Meeting of the Odontological Society will be held at 40, Leicester Square, on Monday, 12th January, 1891. Business: The elections of officers, &c.; short valedictory address, by President; casual communications. Mr. S. J. Hutchinson "On Eruption of Permanent Lower Canines, at nine to ten years." Mr. J. F. Colyer "A Case of Lupus." Messrs. Robbins, Woodruff, Rilot and others, subjects not yet given.

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### Odonto-Chirurgical Society of Scotland.

THE First General Meeting of the Society, Session 1890-91, was held on November 13th, the President, Mr. JOHN A. BIGGS, in the chair.

After a few introductory remarks, the PRESIDENT vacated the chair and proceeded to give a demonstration on Dr. Reichter's Glass Inlays. He showed several teeth with the work in various stages, from the prepared cavities to the completed inlays, many of the cavities being,

for ordinary inlay work, very difficult. He also showed a canine tooth with a large cavity in the labial side, which he filled with an inlay in a few minutes. Mr. Biggs said he did not come before the meeting to advocate inlay work at all; he thought it had not been sufficiently long before the profession to definitely say whether it would be permanent or not. His opinion was that the cement necessary for its retention would give way, unless in circular cavities. But he thought it would interest those who had not tried it, and therefore he had brought it before them. This kind of inlay promised much. It was rapid, simple, and effective. It was difficult to attain the desired shade, and required care and scrupulous cleanliness in its manipulation; but the result could be achieved in a tenth of the time necessary in the use of porcelain inlays.

The demonstration was received with much interest, but, in accordance with the custom of the Society, the discussion was postponed till the following meeting.

On the President resuming the chair, Dr. WILLIAMSON read a communication entitled, "Notes on the Demonstrations at the Berlin Congress":—

I have just put together a few notes on the demonstrations, in the hope that they may interest those who were not present.

The Dental School in the Dorotheen Strasse seemed a very conveniently arranged building, the rooms well lighted, and the dental furniture, such as the operating chairs, very good indeed. It was a pity that some systematic arrangement was not made in regard to the demonstrations, as they suffered considerably from the want of it; each demonstrator pitched his tent when and where he pleased, and there was a good deal of difficulty in getting patients suitable for the various operations.

The great crush was in the Extraction and Anæsthetic Room, owing, probably, to the fact of the exhibition of bromide of ethyl, an anæsthetic first used as such by Nunnely, of Leeds, as long ago as 1849, and which seems to have been taken up of late by many German dentists. As Dr. Silk, the London anæsthetist, remarks in a letter to one of the journals, the conditions were such that it was impossible to come to any satisfactory conclusions in regard to it. The narcosis is certainly not profound, and the curious English translation of a paper in German, "Stunning by Bromide of Ethyl," seemed to give a more accurate description of its effects than was perhaps intended by the translator. One patient, for example, a youth of about twenty, struggled and plunged about, called out, "Halten sie, halten sie;" but when quite conscious, half a minute later, ejaculated "Gar nichts," when asked if he had felt any pain. I could not help thinking that such an exhibition would be very demoralising to any chaperone or unprofessional companion of a patient in private practice. Prof. Busch, in reply to my question,

said he certainly preferred gas to the bromide of ethyl. It is given much in the same way as ether, a facepiece being used, with a valve which is raised and the liquid dropped on a piece of flannel situated within the opening. A few weeks ago a paragraph appeared in the *British Medical Journal*, giving a great number of untoward results from its use, including several deaths; and this fact of its not being so safe as was originally supposed, combined with the difficulty of obtaining and keeping it as a stable compound, will probably lead to its abandonment, or, at any rate, very partial use. The only other anæsthetic of a general nature that I saw used was gas alone.

There was one point in the matter of the operation of extraction itself which must have been quite novel to many, and that was, the manner of removing upper teeth. The operator stood at the back of the chair, the patient having the head well bent backwards, and, grasping the forceps with the handles farthest from him, pushed, or rather drew, the blades towards himself. In this country, the operator always, I presume, stands on the right side, puts the left arm round the head, the right arm being as close as possible to the body, and the forceps are held with the thumb directed towards the blades, resting on and partly between the handles, near the joint, helping the fingers to control the amount of pressure on the tooth. In the German method—or, perhaps, only the Berlin method—the head is not under such thorough control, and the outstretched position of the arm, combined with the position of the thumb, resting on one of the handles, just where they are widest apart, is sufficient to destroy, at any rate to a great extent, that tactile sense which is so necessary for the successful performance of the operation. A better view may perhaps be obtained, but certainly not any better practical results, if one might judge from seeing a few cases.

Passing to local anæsthesia in the case of sensitive dentine, there were two new methods exhibited, both by Americans. Dr. Curtis showed an apparatus for employing nitrous-oxide gas, by means of attaching a strong leather-cased piece of tubing to the bottle, the other end being fitted with a nozzle with tap for directing the jet of gas. It seemed to answer well in the only case I saw it used, but owing to the bottle being one of those where the gas comes off very irregularly, in sudden bursts, and there being no quieter attached, the operator was unable to keep the blast from going all over the mouth. It was also used for the painless extraction of a loose tooth; but here again the same unfavourable conditions, combined with the extreme looseness of the tooth, prevented a proper conclusion being formed. The principle of its operation was said to be "dehydration;" but how that can apply both to relief of sensitive dentine and the extraction of teeth, one cannot very well understand.

Dr. Niles showed a little instrument, the idea of which was to apply the vapour of alcohol to the cavity, and which is the invention, I

believe, of Mr. Small of Boston. A small piece of metal tube is filled with cotton wool saturated with alcohol, and slipped into a somewhat larger tube with a closed end, and a rubber cork prevents the vapour escaping. Through the closed end passes a fine piece of metal pipe with a bulb on it, and this bulb is heated in the flame until the vapour passes off. The nozzle is then held for a few seconds in the cavity, and the excavation proceeded with. Having some sensitive parts at the neck of my canines, I acted as patient, and it certainly removed the feeling when scraped with an excavator, but I did not see it used in any good case of the kind. Since coming home I have tried it on a few occasions, but my faith in its efficacy is not very strong.

In the matter of fillings, there were demonstrations with the electric, Bonwill improved mechanical, and hand mallets. The tin and gold combination, which seems to have taken such a strong hold in Germany, I did not see used, except by a student, I think, who was filling an approximal in an incisor with it—not, certainly, a very suitable place, but probably there was the question of cost. Mr. Brunton, of Leeds, in a distal cavity of a canine, demonstrated the method of using amalgam at the cervical wall, and finishing with gold. Then there was the new method of glass filling, which Mr. Biggs has demonstrated to-night.

In the way of crown work, there was a demonstration of putting on a Richmond crown, by Dr. R. W. Starr of Philadelphia, who confines himself entirely to crown and bridge work, and whose name is well known on both sides of the Atlantic in that connection. As there were various points of interest in the methods employed, I hope you will pardon me for giving a somewhat minute detail of the operation. The tooth was a right central incisor with a distal cavity, having an exposed pulp, and the distal corner broken off. The operator stated that he never used arsenic except in cases of back teeth, and also that teeth may be cut off with hardly any pain without its use. The tooth was nicked on both sides, labial and palatal, with thin discs, and cut off with an excising forceps in the usual way. Then taking a hickory peg, one end whittled down to somewhat less than the size of the pulp canal, the point was dipped in carbolic acid and driven home with a smart tap, producing evidently little pain, the projecting end being then twisted off. (Since coming home, I have tried this method once or twice, and the results incline me to believe that where in a single-rooted tooth you have free access and a pulp canal free from secondary deposit, especially at the entrance, this is a much better method, because less painful, than the ordinary one of removal by a nerve broach. Dr. Harlan, of Chicago, a short time ago, gave his experience of half-a-dozen cases where he tried it, with the result that the majority of the patients left him, and some threatened him with an action for damages. These, however, were probably cases for filling, and the conditions much less favourable than when the pulp and pulp cavity

are completely exposed, as in excision of the crown.) The root was trimmed entirely with the corundum discs, bevelling especially the palatal portion, which was not ground down to the gum level. The diameter of the root was then taken with wire in the usual way, but instead of cutting it at the lap, which is the direction in the books, it was cut opposite to it and the divided ends straightened out, the twisted portion thus forming a convenient handle. One of the ends of the wire being shortened by about one-sixteenth of an inch, a piece of coin gold, number 29 of the American gauge, and about one-eighth inch wide, was cut off, the ends placed edge to edge, and soldered in the bunsen flame, forming the collar. This was then placed on the root, and, after a little adjustment, was forced up to fit tightly. It was then taken off, the gum edges bevelled, the sides being also filed concave, while the other edge was bent outwards slightly. Having been again placed in position, it was ground down to the level of the stump. A piece of plate of the same thickness as the collar was then placed on the top, held by a clamp and soldered. The superfluous plate having been trimmed off, the cap was finished and ready for adjustment. The root canal, with the remains of the wooden peg, was then drilled out deep enough for the pin, the end, however, of the peg being allowed to remain as a permanent apical plug, the operator stating that the pulp was literally displaced or knocked out by the peg—quite a new light to me, who always thought that the invariable practice was to remove the whole of the peg along with the pulp, as soon as it had been driven up. The cap having been put on, a sharp point was forced through it, opposite the root canal. A piece of gold wire, in default of a platinum-iridium one, was then pressed through the hole in the cap, so that it was held tightly in place, and did not require the aid of wax to retain position. Taking the cap off, the pin was soldered, and the tooth was then fitted to the cap, the neck overlapping the gold in front, the whole of the adjustment being done in the mouth, so that there was no impression taken from beginning to end. The tooth, cap, and pin were then put in a mixture of asbestos and plaster and soldered. To attach the crown, Dr. Starr used Baldwin's oxyphosphate cement, which he stated did not pack in pressing up into position, the excess oozing out readily and not requiring a vent hole. As to time required for such an operation, he stated that a few minutes over an hour was sufficient for most ordinary cases.

Dr. Melotte, of Ithaca, another well-known authority, made a small bridge of one tooth, a lateral incisor, where the root had been extracted. As this demonstration was carried on simultaneously with the one just mentioned, I was not able to follow the detail so closely. A very nicely fitting gold band was made to fit the canine which was sound, about one-eighth of an inch being the width shown in front. To the side of this, the backed tooth was soldered with a small spur on the other side, resting against the back of the central, also a sound tooth.

There was another demonstration of adjusting ready-made gold crowns, of which, however, I merely caught a glimpse.

The operation of implantation, as usual, attracted great attention, especially as its introducer, Dr. Younger, was the operator. The operation has, unfortunately, a sort of sensational side to it, and there seems to be a tendency on the part of its exponents to pander to that. I do not suppose that it was Dr. Younger's choice, but at any rate he was induced to use a bicuspid tooth of a mummy, the crown of which had crumbled off and was replaced by a crown of a natural tooth attached by cement. The root itself, I need scarcely say, was of that deep brown colour one finds in teeth whose age is measured by centuries. There was no possible reason for its use, except as I have just stated, and it seemed to be quite a degradation of an operation which is presumably a scientific one. In this case, no exception could be taken to the very neat manipulations of Dr. Younger himself, and which might be regarded as the redeeming feature.

Of mechanical dentistry proper there was little to be seen, Mr. Cunningham, of Cambridge, having it nearly all to himself, in his demonstration of a low heat porcelain gum, which has been since shown at Exeter. His knowledge of all the official languages enabled him to make the most of his auditors understand the process.

Though not a clinical demonstration, I may perhaps add, in closing, that the exhibition of micro-photographs by Mr. Mummery seemed to be the most appreciated feature in the dental section.

Mr. WILSON exhibited an upper molar, the pulp of which had become calcified after its exposure through fracture. Also the model of an under jaw, showing suppression of lateral incisors with a good history, as the patient and her parents had taken considerable interest in the teeth not coming as they ought.

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### General Medical Council.

*Friday, November 28th.*

#### THE CASE OF THOMAS HAWKINS.

The President Mr. John Marshall in the Chair.

The REGISTRAR : Thomas Hawkins, registered in the Dentists' Register as in practice before July 22nd, 1878, has been summoned to appear before the Council to-day on the following charge, "That on the 25th day of June, 1889, he did fraudulently procure himself to be entered in the Dentists' Register as a duly qualified dentist in practice before July 22nd, 1878, he not having been in practice in accordance with the statement and declaration whereon he founded his claim to registration, and he not having



any qualification." Thomas Hawkins has been called and he is not here. The Report of the Dental Committee on the case is as follows :—

REPORT BY THE DENTAL COMMITTEE ON THE CASE OF  
THOMAS HAWKINS.

The case of Thomas Hawkins having been referred to them by the Executive Committee to ascertain the facts in regard to such case, the Dental Committee find the facts to be as follows :—

That Thomas Hawkins was, on June 25th, 1889, registered under the 37th section of the Dentists Act on the usual form of request for registration, dated May 9th, 1889, and supported by the joint declaration of himself and David Holland, and a copy of his indentures of apprenticeship, from which documents it appeared that he was duly apprenticed on December 1st, 1877, to David Holland, at 71, Alexandra Road, Manchester; that his services were to be an equivalent for a premium; that he duly fulfilled all the conditions of his apprenticeship; and that his articles expired December 1st, 1881, when he was forty-five years of age.

That David Holland, the declarant above mentioned, was born on the 12th day of December, 1859, and was therefore on 1st day of December, 1877, of the age of eighteen years only or thereabouts.

That Thomas Hawkins, during the years from December, 1877 to December, 1881, was working as a carpenter and joiner, and in particular during the years 1877 and 1878, or one of them, was employed by the Audley Brick Company to do the joiner's work in a row of houses they were building at Church, near Accrington, and that during that time he resided at 2, Newark Street, Lower Audley.

That in March, 1879, he worked regularly on buildings at Hapton, which he was putting up in conjunction with one William Bullock, during which time he lived at Burnley Road, Huncoat.

That he continued to work as a joiner up to and after December, 1881.

That in November, 1885, he entered the service of a Mr. Nuttall, of Bacup, as a canvasser and collector, and continued there till October, 1888, and during that time never assisted in Mr. Nuttall's dental practice.

That David Holland, the declarant, whose proper name is David Cooke Holland, was in 1877 living with his brother, George

Holland, at Blackburn, and was learning dentistry from the said George Holland; and that in September or October, 1878, the said declarant came to 71, Alexandra Road, where for the first time he began to practise dentistry.

That David Holland had no apprentice while he lived at 71, Alexandra Road, which was from the autumn of 1878 to the year 1885.

The Dental Committee report these facts to the General Medical Council.

JOHN MARSHALL,

*November 27th, 1890.*

*Chairman.*

Mr. Farrer, solicitor to the Council, attended, and Mr. Muir Mackenzie was also present as legal assessor.

Mr. FARRER: I first hand in —

Dr. QUAIN: I move that strangers withdraw.

The PRESIDENT: Not on the facts.

Dr. QUAIN: You cannot question the facts.

The PRESIDENT: It is a question of practice. The Dental Committee were appointed in order to investigate the case and find the facts. The Dentists' Committee having all the facts before them, have agreed to report them to the Council; they have gone into the facts thoroughly, so that unless the Council wishes to impose its judgment and go into the facts for itself, I think we are in a condition to decide on those facts.

Dr. QUAIN: If there is no dissension the case is closed and strangers are not to be present while it is discussed.

The PRESIDENT: Has it arrived at the stage at which this Council is satisfied to receive the report?

Mr. FARRER: I hand in the duplicate summons, and also some letters which passed.

Strangers were then directed to withdraw.

On their re-admission—

The PRESIDENT said it had been resolved on motion put from the chair, "That the Council having considered the facts of the case of Thomas Hawkins, as submitted by the Dental Committee, find that the entry of the name of Thomas Hawkins in the Dentists' Register has been incorrectly and fraudulently obtained, and they direct that the name and qualification of the said Thomas Hawkins be removed therefrom."

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### The Dental Hospital of London, Annual Dinner.

THE Annual Dinner of the Staff and Students of the Dental Hospital of London took place on the 29th November, at the Holborn Restaurant. The music was all the more enjoyable because it was chiefly provided by the students and their friends. Among the many good things was an original topical song, written by two members of the staff, specially for the occasion, and excellently sung by Mr. Alfred Smith. Mr. Schartau also delighted those present with his inimitable humour, and his songs were highly appreciated.

JOSEPH WALKER, Esq., M.D., L.D.S., presided, and was supported by Drs. Wilks, W. J. Collins, and Messrs. Christopher Heath, Sibley, Pearce Gould, H. Morris, H. Power, Andrew Clark, Stanley Boyd, Scott-Thompson, De Haviland Hall, and a numerous company, including most of the leading members of the dental profession.

After the toast of "The Queen and Royal Family" the CHAIRMAN proposed "The Past and Present Students." He was glad to say he had nothing but congratulation to offer them, and, thanks to the efforts of Sir John Tomes and the acumen of Mr. Jas. Smith Turner, he could address them as members of one commonwealth: through them the profession enjoyed an inheritance, the importance of which it was impossible to over estimate; an inheritance absolutely closed to all comers except through four portals: one for England, two for Scotland, and one for Ireland. What other profession, he asked, was so safely guarded at the present moment as theirs? There was one only, and that the Navy; the Navy was bound to have apprentices who were bound to serve five years, and to present themselves for periodical examination. In order to keep their inheritance let them put their shoulders together and preserve a united front, let them send their best men, those who held their profession in the highest possible estimation, to the examining boards. They had one other protection, viz., the General Medical Council, which possessed the power of maintaining the standard of every one of these Boards. In advocating clinics he claimed Sir John Tomes as the originator of dental clinics in this country. In espousing the cause of benevolence the Chairman remarked that it was a regrettable fact that of the 976 registered dental surgeons only 54 were found on the regular subscription lists. In conclusion, he referred to the increasing number of students, the general prosperity of the school, and the high estimation in which the Dean and staff were held. He coupled with the toast the names of Mr. W. A. Maggs for the past students, and Mr. W. May, Mr. Coysh, and Mr. Gask for the present students.

Mr. W. A. MAGGS, in responding, felt the difficulty of adequately representing the sentiments of so many men as had passed through the school, but thought he would have their unanimous support in expressing their sense of indebtedness for the instruction which enabled them to carry on the profession of their adoption.

Mr. W. MAY, in reply, spoke of the congenial nature of a student's work, his pleasant companionships, agreeable associations, and students' meetings, making their student career a happy dream far too short.

Mr. COYSH and Mr. GASK also replied.

Dr. SAMUEL WILKS then rose to propose "The Hospital and School." Those who knew him knew that he had a great objection to "specialism" in medicine; but in surgery, the manual skill and dexterity demanded, could only be obtained by long and patient training such as could not be given to the whole field of surgery, and necessitated specialism; from this point of view, dentistry was more differentiated than any other, and must be put at the head of the profession as a specialism. When he spoke well of dentistry, he did so for a particular reason: the great advance of late years had been, in what is called conservative surgery, and he was under the impression that long before the surgeon commenced conservatism, the dentist had already done so; he looked upon it as one of the highest arts of the present day, this conservation of the organs of the body. The man who preserved an old tooth was better than the man who put in a new one. He had always heard and felt that dentists were the leaders in this great department of conservative surgery. If the dentist could do so much for those who could afford it, what a boon was a hospital which gave the poor access to the same advantages? In alluding to the extent to which sentiment influenced the direction of charity Dr. Wilks said that he once asked a wealthy old lady where all her money was going to, and she replied "Lifeboats and Idiot Asylums." Would not some of the money be more wisely spent in the support of such institutions as the Dental Hospital of London? Referring to the relation of hospitals to schools, he maintained that they were mutually necessary and beneficial to each other. He begged to give them the toast of "The Hospital and School," coupled with the names of Mr. Septimus Sibley and Mr. Morton Smale.

Mr. SIBLEY briefly replied, and said that he was happy to be able to assure them that the object of the toast was in a most flourishing condition, full of health and activity.

Mr. MORTON SMALE, who was received with prolonged cheers, having expressed his hearty thanks for the enthusiastic reception given to the toast, referred with satisfaction to the large number of reporters present, and hoped that they would make the public understand that the L.D.S. was the only criterion of fitness for a dental surgeon, and that these letters did not necessarily mean L.S.D. He spoke strongly in support of the admission of a dental representative upon the General Medical Council.

Mr. F. CANTON, in a few well chosen sentences, proposed "The Visitors," coupled with the name of Dr. W. J. Collins.

Dr. W. J. COLLINS, in acknowledging the toast, spoke warmly in

favour of direct representation for the Dental Profession on the General Medical Council. It had now attained to such a position that it was entitled to ask it as a right. He based his argument on the broad ground that representation should go with taxation; that a distinct and separate register entitled it to a distinct and direct representative.

Mr. DAVID HEPBURN, in proposing the health of the Chairman, said they had in the chair a gentleman who was associated with the early beginnings of the hospital; a gentleman who was appointed as one of its first assistant surgeons. Dr. Walker would feel some sense of gratification when looking round upon the large gathering, and contrasting the growth of the Hospital with what it was in those early days, in knowing that it was in no small measure due to himself. It was the fashion to enlarge upon the virtues of a chairman, he would take but one of Dr. Walker's virtues; his peculiar distinctive quality was the wonderful energy he threw into every undertaking—for the younger men it was really an example to follow. He would now pass on to Dr. Walker's faults, for he would not be human if he were perfect, and Dr. Walker was very human. Well, he only knew of one fault, and that was the fault of never growing old. When they went back into antiquity for their Chairman they expected to find silvery hair and a little becoming decrepitude, but in Dr. Walker they found the brightest, and liveliest, and best type of what a dental surgeon should be.

Dr. WALKER expressed his heartfelt acknowledgments. He was more than repaid to know that what little he had done, or tried to do was appreciated, and that he had many friends in the profession.

After the toast list a few more songs brought a very successful evening to a conclusion.

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### National Dental Hospital and College.

THE annual dinner of the past and present students of the above institution took place at the Holborn Restaurant on the 21st ultimo. It was also the occasion of the distribution of prizes. Dr. B. W. RICHARDSON, M.A., M.D., F.R.S., occupied the Chair, and was supported by Messrs. Hy. Morris, Treves, G. Gregson, J. Smith Turner, Morton Smale, Felix Weiss, Roughton, G. Cunningham, Drs. Buxton and Maughan and a good company of the staff, students and friends.

The repast being ended, Dr. Richardson distributed the prizes, the prize winners being introduced by the Dean, Mr. HENRI WEISS, who, in the course of some prefatory remarks, pointed out that two new prizes appeared in the list for the first time: one, a prize of three guineas, given by Messrs. Ash & Sons, for the best thesis on a dental subject, to be selected by themselves; the other, an Entrance Exhibition of £15. The latter, the Dean stated, was not only the first Exhibition offered by

the National Dental, but was also, so far as he was aware, the first offered by any dental hospital.

The following is the Honours List :—

*Bronze Medals.*—Dental Anatomy, Mr. Moore ; Dental Surgery, Mr. Bascombe ; Dental Mechanics, Mr. Moore ; Metallurgy, Mr. Bascombe ; Operative Dental Surgery, Mr. Moore ; Dental Materia Medica, Mr. Moore ; the "Rymer" Gold Medal for General Proficiency, Mr. Moore ; the "Ash" Prize of three guineas for the best thesis on "Hæmorrhage after Tooth Extraction," Mr. Arnold Prager ; the Entrance Exhibition of the value of £15, Mr. McFarlane ; Students' Society Prize, Mr. Haycroft, Mechanical Work, Mr. Keele. *Certificates.*—Dental Anatomy, Mr. Cutts ; Dental Surgery, Mr. Burberry Rowe ; Dental Mechanics, Mr. Prager ; Metallurgy, Messrs. Johnson and Keele ; Operative Dental Surgery, Mr. Bascombe ; Dental Materia Medica, Mr. Prager ; Elements of Histology, Mr. Bascombe.

On the conclusion of the awards the toasts were proceeded with. The usual loyal toasts having been honoured, the CHAIRMAN proposed "The Hospital and Staff," and in doing so said : "Many as were the friends and students of the hospital and school, there was not one who could propose the toast with greater feelings of pleasure than himself. He knew of the birth of the school. Some generation or so ago there was a college existing in the metropolis called the College of Dentists, and he had the honour to be invited to deliver the first course of lectures ; he accepted the invitation and afterwards published the lectures. At the end of the session Mr. Kimpton, Mr. Lee Rymer, Mr. Harding, Mr. Robinson, himself and many more supped with the President, Mr. Peter Matthews, and it was upon that occasion that he suggested the foundation of a dental school, which resulted in the formation of the Metropolitan School of Dental Science, now known as the National Dental Hospital and School. He had the pleasure of being among the first body of lecturers, which included the names of Mr.—now Sir Spencer—Wells, Prof. Wood, Mr. Holmes and Mr. Perkins. He believed it was just thirty-three years ago since he had the honour of giving the address, and in the evening of presiding over the dinner. After the lapse of a generation he was so fortunate as to be again President. Soon after the Dental Hospital of London was started, and Mr. Gregson was among its first teachers. For some years a keen rivalry existed between the two institutions, but they were now happily running side by side in friendship. Having referred to his visit to the building, made in company with the Dean that morning, he adverted to the new premises shortly to be commenced, but exhorted them not to be in a hurry to leave the old place—there was always something exceedingly pleasant in holding on to old places. In a new building they would have larger numbers and more experienced teachers—for teaching was of that nature that it had a continual pro-

gressive development. In conclusion, he asked them with warm hearts to drink to the remembrance of the old, and in anticipation of the coming time. He gave them the toast of "the Hospital and Staff," coupled with the names of the Dean and Mr. Roughton.

The DEAN, in responding, said that the hospital itself was an institution which endeavoured to attract the public within its walls, so as to supply the material which was best suited for the instruction of the future generation of practitioners. The interest of those conducting such an institution was centred in organising it in such a way that the teaching might be successfully carried out, and at the same time that the teaching might result in the greatest possible relief of the suffering poor. Some critics had said that the school and the hospital must be antagonistic to each other, but he thought that that was by no means necessary; if the demands upon the students were such that they were called upon to work too rapidly and scamp their instruction, the charity would then undoubtedly be detrimental to the school, but so long as the number of patients and students was relatively balanced, the hospital and school would be mutually beneficial to one another—the former supplied the material for the latter. With reference to the history of the National Dental Hospital, which was generally well known, he would make but one remark, viz., that until dental education became compulsory its presence was hardly necessary, and it and the sister hospital were rivals. With the Act of 1878 that condition of things ceased. The scourge of dental disease was such that 90 per cent. of the population passed through the hands of the dentist, and he believed that at the present time half-a-dozen dental hospitals in the Metropolis would not be too many. In conclusion, the Dean claimed the right to be proud of the fact that every single student of the National Dental who presented himself at the recent examination had been successful.

Mr. ROUGHTON briefly replied, stating that he felt it a great honour to be invited to attend the dinner, and a very great honour to have been appointed honorary visiting surgeon to the hospital.

Dr. MAUGHAN proposed "The Past and Present Students." It was a toast he was very proud to have been entrusted with, but he was sure it would have been more eloquently and ably proposed by one to whom the students owed a very deep debt of gratitude, viz., Mr. Sydney Spokes. He coupled the toast with the names of Mr. Rushton and Mr. Bascombe.

Mr. RUSHTON, replying for the Past Students, referred to the change in the examination since the previous distribution of prizes by the inclusion of dental mechanics—a change, in his opinion, greatly for the better. No dentist could be thoroughly efficient in his profession who was not fully competent in the workshop as well as in the surgery. He ventured to disagree with a leader in a recent issue of one of the dental journals, that the dental examination was as near per-

fection as possible; on the contrary, he thought there was great room for improvement, and strongly advocated the elimination of all subjects from the dental curriculum in which the student was not examined.

Mr. BASCOMBE briefly responded on behalf of the Present Students.

Mr. ALFRED SMITH gave "The Visitors," to whom, he said, they always desired to give a most hearty welcome. In the course of his remarks he read a letter from Sir Spencer Wells, regretting his inability to be present, and wishing continued prosperity to the hospital and school. In coupling with the toast the name of Mr. Morton Smale, he spoke of their indebtedness to him, both as a profession and as a school, for his services.

Mr. MORTON SMALE, in reply adverted to the kind manner in which Mr. Weiss had spoken of the school in Leicester Square, and said that he felt happy to have been included by the Dean as one of the friends of the National Dental School. His desire was to be one of the friends of that school, and he hoped that the days of rivalry had for ever gone: he could only say that if the other guests had derived but half the pleasure which he had experienced in being present, their evening had been a very pleasant one indeed. Mr. Smale then alluded to the question of obtaining a dental representative on the General Medical Council—an object which he had very warmly at heart. He urged upon the students that it was an object that they might all help forward by getting a promise from each of their medical friends of one at least of their three votes in favour of Mr. C. S. Tomes at the next election. In conclusion, he again thanked them for the kind way in which the toast had been received.

Mr. GEORGE CUNNINGHAM proposed the health of the Chairman in felicitous terms, alluding to the distinguished services Dr. Richardson had rendered to the medical and dental profession, and to the world, throughout his long and honourable career.

The CHAIRMAN, in acknowledging the compliment, spoke of his many causes of gratitude—his unbroken health, his happiness of disposition, his good fortune in entering the medical profession at the time he did, his connection with literature, the friendships he had formed; but his most intense gratitude was for his long connection with the National Dental Hospital, and the friends that he had found there.

During the dinner a selection of instrumental and vocal music was well rendered by the Bijou Orchestra, and by Messrs. Sidney Barnby, David Strong, H. Parkin, and Vernon Taylor. Mr. W. H. Thomas presided at the piano.

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### Birmingham Dental Students' Society.

THE monthly general meeting was held at the Dental Hospital, 71, Newhall Street, on Thursday, 27th November.

The chair was taken by the President, FRED. RICHARDS, Esq., at 6 o'clock.



The following gentlemen were also present :—Messrs. Mountford, Howard, Westwood, Parrett, Madin, E. Sims, P. Sims, Whittles Fisher, Dammann, Warmington, Matthews, and Owen.

The minutes of the previous meeting were then read by the Secretary, Mr. OWEN, and confirmed.

On the proposition of Mr. RICHARDS, seconded by Mr. OWEN, the following gentlemen were unanimously elected members of this Society :—Messrs. Albert W. Gray, Blakenay, and A. W. Jenkins.

Mr. FRED. RICHARDS then gave his presidential address, in which he pointed out the progress of dental students' education in Birmingham, and also the subjects on which they are examined for the L.D.S. London.

The CHAIRMAN then called upon Mr. Howard for his paper entitled "The Conduct of Dental Operations under Anæsthetics," in which he pointed out the conditions under which an anæsthetic should be administered, the dangers which should be guarded against, the surgical and restorative appliances which should be at hand in the event of accident, and the methods employed in restoration. An interesting and lengthy discussion ensued, in which the following gentlemen took part—Messrs. Richards, Parrett, Mountford, Westwood, Owen.

Mr. HOWARD replied to the various remarks made during the discussion, and thanked those gentlemen taking part for calling his attention to points which he had omitted to mention in his valuable and interesting paper. The usual vote of thanks was passed to Mr. Howard for his valuable paper, and also to the President for his interesting address.

The PRESIDENT then announced that the next meeting would be held on December 18th, when Mr. Charles Sims would read a paper entitled "Ancient Dentistry."

The proceedings then terminated.

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## MINOR NOTICES AND CRITICAL ABSTRACTS.

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### Deaths under Anæsthetics.

WE drew attention last week to the alarming frequency of the occurrence of deaths under chloroform. The press reports of four more are before us. An inquest was held at Brighton upon the body of a man, aged sixty-four, who died during the administration of chloroform. From the evidence it appeared that deceased, who was a builder's foreman, fell on September 22nd from a ladder, dislocating his thigh, and suffering much contusion and bruising of the parts. When seen by a surgeon there was too much swelling for any accurate diagnosis to be arrived at, so that it was not until nineteen days after the accident that chloroform was administered and replacement of the femur

attempted. The patient is described as having taken the chloroform quite satisfactorily, the operation of reducing the dislocation being duly accomplished, when "the heart suddenly stopped vibrating," and all attempts at restoration failed. Examination of the heart before death gave no evidence of disease, but the *post-mortem* inspection showed that viscus to have possessed very thin walls. The surgeon in whose care the deceased had been, attributed death to the "action of the chloroform upon the heart." Deaths from chloroform, as has been asserted over and over again, result from insufficient doses as well as over doses. A correspondent of the *Glasgow Herald*, writing presumably as a layman, asserts that the profession have overlooked the danger of "an underdose." But he is quite wrong. The teaching of those who regard chloroform as a useful but dangerous anæsthetic has been consistently that there is a grave danger of reflex inhibition of the heart when operations are carried on during imperfect anæsthesia, and that this peril is no less than that of destroying the activity of the respiratory and cardiac centres in the medulla by overdosage. A fact of significance in the case is that at the necropsy thinning of the walls was present, and this is an important factor in the explanation of the cause of death. The profound anæsthesia which the chloroformist justified as being necessary for the rendering of the muscles quite flaccid preparatory to the reduction of the dislocation no doubt produced a perilous degree of dilatation of the heart; owing to the tenuity of the cardiac walls the viscus failed to contract, fatal syncope resulting. Another case was that of a plasterer, an injury to whose eye necessitated enucleation. He applied to the North Staffordshire Infirmary, Stoke, and was admitted. The man was, we are told, chloroformed by a house physician, with the view to having the operation performed, but died under the anæsthetic. The particulars, as usual, are too sparse to admit of rigid criticism. The next casualty occurred at St. Mary's Hospital, Paddington. A bricklayer's labourer, being injured, was admitted into the hospital and placed under chloroform by Dr. Horace Collier, as suturing the fractured patella had been decided upon. He gave one drachm and a-half of chloroform from an inhaler. Within half a minute of the loss of consciousness the heart ceased to beat, and death took place in spite of all efforts at resuscitation. The necropsy revealed that "death resulted from syncope," the fatty state of the heart sufficiently accounting for this.—*The Lancet*.

### Dangers from Necrosed Teeth.

BY WILLARD P. BEACH, M.D.

MR. A. has been under my immediate observation for the past ten years, and his case illustrates very forcibly, at least one of the dangers of retaining necrosed teeth in their sockets.

About nine years ago the second bicuspid of the right upper jaw contained a cavity, which was filled with amalgam, and shortly afterwards commenced to ache severely. He insisted on having the filling removed and the nerve killed, which was done. A few months later the tooth died and blackened, and a sinus opened through the gingival mucous membrane in the region of the tooth's root. This state of affairs lasted about two years, when a series of small abscesses

occurred on the right pinna which lasted for about one month, and numbered ten or twelve in all. He recovered from the attack and was tolerably comfortable for a few months when the same experience was gone through with, but this seizure was more prolonged and severe. There were marked constitutional symptoms, and a large abscess made its appearance in the right temporal region. These attacks returned at intervals of a few weeks or months, for several years, each one being slightly more severe than the last, and finally involved the scalp of the right side. About this time a large abscess made its appearance on the knuckle of the little finger of the left hand, and the man commenced to show signs of marked reduction of health and strength.

I have enquired of several dentists as to whether they had ever known of a similar case, and they invariably answered in the negative.

I further noticed, that the vent in the mucous membrane closed, and it was shortly after such closure that the abscesses made their appearance. At last I decided to have the tooth extracted, which was done nearly a year ago, and since that time the patient has been in perfect health, which was an experience he had not known nearly all the time the dead tooth was in his head. The root of the tooth was very much softened and roughened, while the tooth socket and tissues surrounding it were quite sensitive to pressure.

To my mind, this was a case of septicæmia, which I can readily conceive to be the result of pent-up pus in the neighbourhood of the dead root. I would earnestly recommend the removal of all dead teeth, for while we all know that necrosed teeth may be retained indefinitely without causing trouble in many instances, on the other hand, one such case as the above is sufficient to demonstrate that there is always impending danger of either septicæmia, pus in the antrum of Highmore, necrosis of the alveolus, or numerous kindred affections, while a dead tooth is left in the jaw.—*Brooklyn Medical Journal*.

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### Quackery and Covering in Belgium.

THE Asiatic quack oculist, Golam Kader, who, as has been already mentioned in *The Lancet*, has been driving a brisk trade in Brussels, has at last been summoned before a court of justice for illegally practising the art of healing. Evidence was given that the defendant on his arrival in Belgium, commenced to practise in good faith, believing his diploma from Singapore sufficient. When his attention was drawn to the questionable legality of his proceedings, he associated with himself Dr. Declerq, who stated that he acted as cover and screen (*servait de couverture et de paravent*) to Golam Kader, that he was unacquainted with the nature of the latter's medicaments, but acted merely as his submissive assistant (*aide docile*) for the purpose of shielding him from the penalties which legislation had rightly or wrongly attached to practices of the kind. Taking into account the good antecedents of Golam Kader, and the fact, as testified by some of his patients, who were produced as witnesses in court, of the cures he had effected, and, believing that he would not continue to

## THE JOURNAL OF THE

ced him to a fine of only 60 francs or twelve  
of course, the court had nothing to do with the  
ender, the qualified *aide docile*. It is to be  
nal opinion will be brought to bear on him,  
t so adequate a means of dealing with him  
General Medical Council, which would as-  
ch a flagrant case if it were brought before  
system of punishing an avowed quack, who  
public opinion on his side, does not appear

In the case in point it is stated that Golam  
vation from his sympathisers as he left the  
ofession doubtless comes in for some very

sation.  
sudden  
lesso  
frest

### during Etherisation.

g the administration of ether is not such a  
ce as to call for special comment ; but the  
it, of the Wolverhampton and Staffordshire  
ch a nature as to arrest the attention of all  
r. Since ether came to be used as an anæ-  
ges claimed for it was the negative one of  
the heart. The risks incurred by its use  
o the lungs, kidneys, meninges and arteries,  
arm in praise of its non-depressing action on  
is followers is now, however, rudely shaken.  
ement :—" Deceased was not deeply under  
inished the operation, which only lasted two  
time was ether on beyond the mark '3' on  
the house-physician I had finished, the in-  
I commenced to dress the wound. After  
l times, deceased swooned, and then became  
g. At the same time his pupils dilated."  
ner's jury was death from syncope. That  
fessional opinion on the subject. But how  
to all its risks you add death from syncope?  
the etherisation is produced by the most  
with the greatest care, and watched by an

No effort was spared to revive the patient,  
years of age. "His tongue was at once  
and artificial respiration begun. His chest  
towel, and hypodermic injections of ether

In addition, a battery which was at hand  
spiration was kept up for forty minutes, but  
as the quality of the ether inferior ; it was  
of Oxford Street, London, and had been  
r patients. We never met with the record  
næsthesia in which the death was so fairly  
this one of Dr. Hunt's. The patient was  
precaution that professional knowledge and  
at an age deemed most suitable for etheri-

sation. The drug used was of acknowledged purity, withal death, sudden death, death by syncope resulted from etherisation. The lesson is one that the profession should lay well to heart and keep fresh in their memory.—*Medical Press*.

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### The Scarcity of Orris Root.

THE Italian orris root crop, which was gathered about two months ago, has now all been prepared and dried, and shipments of it have reached the great consuming markets. The slight hopes that prices might somewhat recede from their elevated position of the last two or three years after the harvesting of the present crop has not been at all realised; in fact, the best Florentine orris is dearer now than it has been for the last thirty years or more. Between 1860 and 1870 the normal price of the best root just after the harvest fluctuated between 30s. and 40s per cwt., and only exceeded the latter figure on one or two occasions. During the next decade prices ruled much higher, and we believe we are right in saying that in the seasons from 1871 to 1877 the drug reached the figure nearest approaching its present value, the quotation for the best orris in those years being between 70s. and 80s. per cwt. After that prices again receded under the influence of a succession of abundant crops, and during this era of cheapness the employment of orris in perfumery appears to have been greatly extended. But during the last three years prices have again been uniformly high. The principal cause of the present scarcity and dearness of the drug appears to be traceable to the floods which about three years ago destroyed a considerable proportion of the orris plantations. The principal of these are situated around Pontasieve, a small town to the east of Florence, in Central Italy, and most of the root is brought into commerce *via* Leghorn, the nearest port of shipment, in very large casks, containing about 10 cwt. of the dried rhizome. The orris plant is an easy one to grow, and in fact, prefers a sterile and dry soil, the best root being obtained from plants grown against the walls which protect the terraced fields on the Tuscan hill-slopes. But the plant is a very exhaustive one for the soil, and cannot be grown with other crops; moreover, the root does not become fit for gathering until its third year. After 1888, when the advance in the price commenced, the cultivation of the root, which strange to say, had until then been almost restricted to the neighbourhoods of Pontasieve and Arezzo, around which latter town the farmers grow the plant in fields, was extended to other parts of Italy, and largely increased in Tuscany itself; but from the plants then reared no root will be available for commercial purposes until the autumn of next year. Then, in all probability, we may expect a more liberal supply than is now available.—*Chemist and Druggist*.

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REVIEWS AND NOTICES OF BOOKS.

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THE RESPIRATORY FUNCTIONS OF THE NOSE, AND THEIR RELATIONS TO CERTAIN PATHOLOGICAL CONDITIONS, BY GREVILLE MACDONALD, M.D.Lond., Physician to the Throat Hospital, &c., &c. London : A. P. Watt.

THE subject of this work is hardly of less interest to the dental than to the medical reader. By an elaborate series of experiments, carried out by means of ingenious scientific apparatus ensuring the exactitude of his observations, Dr. Macdonald has succeeded in demonstrating many important facts. As so very often happens at the present day when numbers of independent investigators are at work in every department of physiology and pathology, it chanced that at the time Dr. Macdonald was pursuing his researches the identical subject was occupying the attention of Dr. E. Bloch, of Freiburg. It is satisfactory to find that Dr. Bloch's methods and results so closely correspond with those of Dr. Macdonald that there can be no doubt of the correctness of the observations—the two investigators were unconsciously engaged in mutually checking each other's experiments. Our readers cannot do better than study the account of these ingenious experiments for themselves. The facts established are of high practical importance. Among other things it is proved unequivocally that the nose alone is competent to raise the temperature of inspired air, whatever its degree, almost if not quite to blood temperature, and to influence most materially the degree of humidity of the inspired current; so that however dry the external air may be, it becomes in passing through the nose completely saturated with moisture. Besides this, Dr. Macdonald has proved that gaseous exchanges take place in the nose between the blood and air just as in the lungs, and to a not inconsiderable extent. These facts, with others established by Dr. Macdonald's experiments, give a scientific foundation to what has been held and taught for many years, viz., that the nose is the natural respirator; and that so long as breathing through the nose is possible there can be no need for any apparatus covering the mouth to warm, filter and moisten the inspired current. Thanks to the advance of rhinoscopical surgery, now made more and more easy through the aid of perfect instruments, with cocaine as an anæsthetic, there occur few cases of nasal obstruction which,

at the present day, are not readily amenable to operation. For instance, it is certain that vast numbers of children are now annually saved from partial or complete deafness (once thought neither preventable nor remediable) by timely removal of adenoid growths from the naso-pharynx. These growths, by compelling mouth breathing, form alone—as our readers are aware—a fruitful indirect cause of a characteristic mal-development of the jaws. The bearing of this subject on the hygiene of the mouth also makes it of importance to the dental pathologist and practitioner. The book is fully illustrated with cuts of the experimental apparatus employed.

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IRREGULARITIES OF THE TEETH, BY EUGENE S. TALBOT, M.D., D.D.S. Second Edition, 234 illustrations, pp. 261. Blakiston, Son & Co., Philadelphia.

It is always a pleasant task to recommend a good book, and it becomes all the more pleasant when the author, as in the present case, is not a native of this country, and the praise bestowed cannot in any sense be attributed to over zealous friendship. We can most heartily congratulate Dr. Talbot on his new edition, which is so considerable an expansion of its predecessor as to almost deserve to be considered a new work. A new opening chapter has been prepared, which contains a very interesting review of the historical aspect of the subject, the growth of theories and the change of opinion that not unfrequently results, as the reader will discover, not without amusement, in the old and obsolete being furbished up and presented to the world as novelty; another illustration of the adage that there is nothing new under the sun. The general question of etiology, which is very properly regarded by Dr. Talbot as the only scientific road by which to approach the question of treatment, is discussed at length. The result of much patient and conscientious research is a really exhaustive and thorough investigation of the causes, remote and near, of irregularities which will be of great value to the profession—the chapters on the V shaped and saddle-shaped arch are especially interesting. In the second division of his work, that which deals with treatment, the same spirit of thoroughness and the same absence of egotism are conspicuous; even the delicate question of fees is touched upon with good taste and propriety. Before discussing details of treatment, the whole question of the

nature and application of forces is discussed, and general principles illustrated by typical cases. The book is fairly entitled to rank as a tangible and valuable contribution to dental classical literature.

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## OBITUARY.

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WITH very sincere regret we announce the death of Dr. Anthony H. Corley, of Dublin, which took place on December 1st. Most of our readers who were fortunate enough to be present at the Annual Meeting of 1888 in Dublin, will have vivid recollections of the strong sympathy then displayed towards our Association and its aims by Dr. Corley, but it is not perhaps so widely known that his interest in our progress, and more especially the welfare of our Irish Branch, dated from the first formation of the branch in 1887, when, as President of the Royal College of Surgeons in Ireland, he did everything in his power to advance our interests and assist the active officials of the new branch, some of whom enjoyed the privilege of ranking as his intimate personal friends. In 1888 Dr. Corley took an active part in our proceedings, and read a most interesting paper upon *anæsthesia*, which may be found at page 700 of the vol. of the Association Journal for the year 1888. From these few facts it is evident that Dr. Corley deserves at our hands a tribute of regret, and we cannot but feel that in him the dental profession have lost a valuable and valued friend.

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## MICROSCOPICAL AND LABORATORY GOSSIP.

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**IMPROVED VULCANIZATION.**—Dr. George B. Snow, in the *Dental Advertiser* for October, describes an improved process of vulcanization which has the merit of adaptation to any of the methods and vulcanizers in common use. "As it will be necessary to heat the flask twice, it will also be advisable to use some kind of spring-clamp possessing power enough to make the rubber flow and re-adapt itself when reheated.

"In the ordinary method of moulding a plate in a bolted flask, gateways are cut to provide for the escape of surplus rubber, and the mould is packed with a sufficient quantity of gum to fill it. The two parts of the flask, being bolted together, are heated to



soften the rubber, and the flask is closed, any surplus rubber oozing from the mould into the gateways. The flask is then put into a vulcanizer, and heated to the vulcanizing point. While the heat rises, the rubber continues to expand, and it is constantly oozing from the mould into the gateways. If it were cooled, even before it reached the vulcanizing point, there would certainly be a vacuity somewhere in the mould from contraction.

"The moment the vulcanizing point is reached, and the temperature becomes stationary, shrinkage begins; the expansive pressure is relieved, and in a few moments the mass of rubber becomes too small to fill the mould. As it adheres to the surface of the plaster, it is drawn away from the teeth and pins, to which it has less adhesion, as the rubber will not pass from the narrow gateways back into the mould to fill the vacuity, except possibly to a very limited extent." . . . —*Dental Cosmos*.

ISOCHROMATIC PLATES.—A correspondent suggests that those of our photographic friends who are unacquainted with Messrs. Edwards and Co.'s isochromatic plates would do well to give them a trial. The special feature of the plates consists in an attempt to correct the familiar misrepresentation of the tones of orange, yellow and green, which usually photograph over dark, and blue and violet will have the opposite defect. The plates in question are strongly sensitive to the light colours, but sensitive in a less degree to blue and violet, and the result is a much more faithful general effect. These plates, if they do all that is claimed for them, would be very useful in micro-photography of stained preparations.

A BRASS wire coiled spring, similar to a mattress spring, loosely fitted inside the vulcanizer, is suggested by a contemporary as a handy thing to keep flasks out of the water while vulcanizing.

A piece of fresh rubber tubing slipped over the duplex springs of the Shaw engine will strengthen them and prevent breaking. In the same way rubber tubing, drawn over the handles of excavators, make them much easier to handle.

ANNIE FELTON REYNOLDS has the honour of being the first woman graduate from a Massachusetts dental college. She received her degree from the Boston Dental College, June 19th, 1890. Either Miss Reynolds must have been unusually bright, or the male students unusually dull, as she received first prize for senior honours.—*The Dental Advertiser*.

**SUBSTITUTE FOR IODOFORM.**—Josef Messinger and Georg Vortmann, of Aix la Chapelle, have recently patented in the United States a substitute for iodoform, which consists of a red-brown odourless powder derived from iodine and salicylic acid, which is insoluble in water, alcohol, ether or oil, changing to a bright red powder by heating it with mineral acids and melting at about 225° centigrade, with decomposition, and being insoluble in alkalies.—*The Dental Advertiser*.

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## ANNOTATIONS.

**PRESENTATION TO DR. THEODORE STACK.**—On Saturday November 15th, Dr. Theodore Stack was presented by his colleagues of the Dental Hospital of Ireland with a portrait of himself in recognition of his services as honorary secretary of the institution. The presentation was made by Sir W. Stokes, who referred to Dr. Stack's distinguished career and to his services to the hospital. In his reply Dr. Stack mentioned that they had £2,000 in the bank as the nucleus of a new building fund. Everyone who knows Dr. Stack will understand how well he has earned his present popularity with his colleagues. We heartily congratulate our distinguished friend, and trust that he will long continue to serve the profession as ably as he has hitherto done.

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**THE second meeting of the Odonto-Chirurgical Society (Session 1890-91)** was held in the rooms, 5, Lauriston Lane, Edinburgh, on Thursday, December 11th, at 7.30, Mr. John A. Biggs, L.D.S., President, in the chair. Private Business: Nominations; balloting for W. E. Satchell, L.D.S.Ed., Elizabeth Street, Hyde Park, Sydney, N.S.W. General Business: A Method of Preventing Upper and Lower Dentures from slipping Forward, with Demonstrations, by W. Dall, L.D.S., followed by the discussion. Discussions on the papers of the last meeting—viz., Demonstration on Mr. Robt. Reichter's Glass Inlays, by Mr. Biggs. Notes on the Demonstrations at the Berlin Congress, by Dr. Williamson.

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**THE BLACK TEETH OF SIAMESE AND MALAYS.**—The Government of Burmah has lately published an interesting report by Mr. Merrifield on the prospects of planting in Mergui, in the extreme south of Tenasserim, in the course of which he corrects the com-

mon error that the black teeth of the Malays and Siamese are due to chewing betel mixed with lime. It appears that the black colour of the teeth is due to a special process employed for the purpose, for no respectable Siamese would like to have white dogs' teeth, like Chinese, Indians and Europeans. Coconut kernel is carefully charred, and then worked to a stiff paste with coconut oil. When carefully and regularly worked over the teeth, this produces the black varnish which is so much admired. Amongst some Malay tribes it is considered the proper thing not only to blacken the teeth, but to file them down to points like sharks' teeth.

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It is stated in a lay contemporary, *Trade and Finance*, that in New York dental establishments keep open all night for the special accommodation of those who have to work all day and cannot afford to lose time by spending it in a dentist's chair. Operators say that the quiet of the streets by night has a soothing effect on the nerves, which are not so sensitive to pain as when tensely strung by day and by the excitement of daylight surroundings. Certainly the quiet may be an advantage, but the artificial light in constant use must injure the eyesight of the operators.

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DENTAL HOSPITAL OF LONDON ATHLETIC CLUB.—The first of the annual series of smoking concerts of the above club took place at the St. James's Restaurant on Saturday, December 6th, the chair being occupied by Mr. Morton Smale (the Dean). Amongst those present we noticed Messrs. Smith Turner, Hutchinson, Storer Bennet, Paterson, Lloyd Williams, L. Read, Ackery, Mallet and C. Smale. A capital programme had been arranged under the care of Messrs. Pike and Coysh, and through their efforts the company present were enabled to spend a very pleasant evening. Excellent service in the musical line was rendered by Messrs. Bullen, Hankey, Steele, May, Breeze, Herschell, Watts, Leigh, Sibley, Waller, Coysh and Mansell. The pleasant evening was brought to a close by singing the National Anthem, followed by cheers for the chairman and staff.

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THE will of the late Dr. Muirhead, of Langdales, Bushey Hill, near Glasgow, contains a provision of some interest to the faculty. Subject to certain life-rent provisions and other legacies, the testator has directed his trustees to apply the whole residue of his

estate to found and maintain an institution to be called the Muirhead College, for the instruction of women in physical and biological sciences, and where women may receive an education to fit them to become medical practitioners, dentists, electricians, chemists, &c. Hitherto but few of the gentler sex have been tempted to join our ranks.

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A LAY contemporary gives an account (we cannot vouch for its accuracy) of a practitioner, if we may use the term, of dental surgery in one of its departments whose *modus operandi* is so curious that we cannot help quoting the passage. "Perhaps the most remarkable dentist in Europe is Brother Orsenigo, a friar in Rome. This clerical dentist extracts teeth in the same manner in which the Japanese are said to do, namely, by means of the fingers and thumb. The operating room of Brother Orsenigo is at the convent gate, near the bridge of Fabricius. In this room he keeps all the teeth he has extracted, a collection which numbers some thousands. The friar is an immense man, whose strength is extraordinary; consequently, when once he gets a grip of a tooth it is bound to come. On some days he is said to extract as many as four hundred teeth, people coming from all parts of the provinces to seek his aid. Among his patients have been many of the highest State functionaries of the country. He last year extracted a tooth for the Pope, an operation which he performed with his usual success."

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A MEETING of the Liverpool Dental Hospital Students' Society was held Wednesday, November 19th; R. Edwards, Esq., President, in the chair, and a large number of members present. The following gentlemen were elected members:—Messrs. H. P. Harding, J. H. Burroughs, S. A. Westerton, D. W. Parsons, E. C. Dilcock, J. Snape, W. E. Partridge, J. E. Edwards. Mr. Bates showed some skulls and afterwards presented them to the Museum. Mr. Norris showed some models of Regulation cases. The Secretary then read a letter from Mr. E. J. M. Phillips, presenting on behalf of Mr. James B. Lloyd a pair of Anatomical specimens to the Museum. A paper on Past and Present Dentistry was then read by Mr. Hitchon, and afterwards discussed by Messrs. Edwards, Osborn, Mansell, Bates, Gilmour, Parsons and Dunn. After a vote of thanks to Mr. Hitchon the Chairman announced next meeting for December 17th.

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SINCE our last issue a new branch of the Association has been formed to include the metropolitan districts. A meeting was held at which Mr. C. S. Tomes, Mr. Mummery, Mr. Sidney Spokes and Mr. Boyd Wallis were provisionally elected as President, President-elect for the ensuing year, Secretary and Treasurer respectively, and Mr. Spokes was enabled to announce that there were sixty-four members of the Association who had expressed their desire to form the branch, and who constitute its original members. In addition to these several other gentlemen are desirous of associating themselves with it, so that it will commence with a very considerable proportion of those resident within the metropolitan area enrolled upon its list of members, a fact which augurs well for its ultimate success.

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LIST OF MEMBERS.—The new List of Members will be published early in the year. Corrections, either of qualifications or addresses, should reach the Hon. Secretary, Mr. W. B. Paterson, 40, Leicester Square, W.C., before December 31st, in order that the new issue may be as accurate as it is possible for such a list to be.

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JUST before going to press we learn that, following the example of Mr. Thomas Fletcher, of Warrington, Mr. James Wallace, L.D.S.Glas., has handed to the secretary of the Glasgow Dental Hospital a sum of money for the purpose (1st) of providing prizes for students attending the hospital, of £20 for four years, to be called the Wallace Prize, and (2nd) for the purpose of fitting up a laboratory in connection with the hospital. The prizes are to be given (*a*) for excellence in the preparation of, and insertion of, certain pieces of mechanical work, and (*b*) for general excellence in the work of the hospital. The detailed conditions of the competition are left in the hands of the Dental Committee of the hospital, who are in course of preparing a statement thereof, which will shortly be issued.

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## CORRESPONDENCE.

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We do not hold ourselves responsible for the views expressed by our Correspondents.

### Is Camphor Injurious?

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I have always been given to understand that camphor as an ingredient in a dentifrice was injurious to the teeth. I should

like to know if this is a fact, and if so, how it acts. If it is injurious, will campho-phenique harm teeth?

Yours truly,  
INQUIRER.

### Neale's "Medical Digest."

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I notice in *The Lancet* of November 8, p. 1011, that Dr. Neale proposes to issue a cheap edition of the *Medical Digest*, at 10s. 6d. per copy, should sufficient subscribers come forward to cover the cost, or nearly so, of the work, which will exceed £1,000. Comparatively few practising dentistry are aware of the many valuable hints they may derive from this book, which at the price is well worth adding to their libraries. Considering the immense amount of labour the *Medical Digest* has and will cost its author, we sincerely hope he may receive encouragement enough to publish a cheap edition. To secure so desirable an end all who wish for a copy should send a P.C. to Dr. Neale, 60, Boundary Road, South Hampstead, N.W. If published, the book will be issued in June, 1891.

I am, sir,

Your obedient servant,

R. DENISON PEDLEY, L.D.S., F.R.C.S.E.,  
*Dental Surgeon to the Evelina Hospital  
for Sick Children, Southwark.*

### Agreements not to Practise:

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—“M.D. writes: ‘Does an engagement on the part of an assistant not to practise within a certain radius, after the expiration of his term of assiduity require a properly drawn legal document to make it binding, or does a simple written statement of the conditions of agreement, signed by the assistant, suffice?’” You, Mr Editor, remark, “Such an agreement should be in writing, and should be clearly (though not necessarily formally) expressed. The restraint imposed should be reasonable, and the consideration should appear; that is that, in consideration of the benefits (salary, &c.) resulting to the assistant” (salary has been held as not sufficient, as he is paid his salary for services rendered), “he agrees not to enter the service of any other medical man, and not to practise, &c., within a given radius.” Exactly, but what then? The assistant does practise in opposition to you notwithstanding, and makes every possible use he can of the experience he has gained with you and your mode of practice, and also the introductions you have given him to your patients. What can you do? Get an injunction to restrain him with a penalty, &c.? But he is a “man of straw.” Shall you attach his goods and chattels while

he poses as a martyr to your avariciousness (in the eyes of the public)? And still he practises, notwithstanding your injunction, &c. What shall you do now? Get into litigation with the object of proving contempt and committal; and after spending a hundred pounds or two, you are most probably told by the judge it is a restraint upon the freedom of Her Majesty's subjects, and a bar to wholesome competition. The plaintiff is non-suited and condemned in costs on both sides. How, then, can it be done, one naturally asks? I know of no way except by a direct contract to pay a reasonable sum for a definite and reasonable advantage, which must be clearly set forth; for instance:—

"A. agrees to serve B., &c., &c., with six months' notice to leave on either side, unless terminated by mutual agreement, for such a salary as shall be agreed upon from time to time, and in the event of A. wishing to terminate the agreement to serve, &c., and practise in the town, or within a given radius, as a physician, surgeon, &c., dentist or dental-surgeon, alone or in conjunction with any other person or persons using the title of physician, surgeon, dental-surgeon, dental-institute, co-operative dental-institute, &c.,"—bring in all the assumption or titles you ever heard or read of—"and in the event of A. wishing to practise alone or in conjunction with any other person or persons using such titles, &c., &c., the said B. agrees to allow and consents to his doing so, and to use B.'s name in any way he please for his own advantage, &c., &c., and in consideration for such salary he has from time to time received. And in consideration for the experience he has gained under B.'s tuition, and for the introduction to his patients and the privilege of using his name in conjunction with his own, &c., he hereby agrees to pay the sum of £500, to be paid in monthly instalments of £100 each, which shall be paid to the said B. whether A. uses all the privileges accorded him or not, or to practise by himself only, &c." It will be seen that under this arrangement you have not to apply for an injunction, and you may issue a writ and seize (for value received), and that you can do each month with costs, and the freedom of Her Majesty's subject would not be interfered with so long as he paid as per his contract, and if this agreement is backed up, as I have known it in many cases by a good bondsman, not by a "man of straw," so much the better.

Doubtless any simple informal but definitely expressed agreement would serve a purpose, so would a letter with a sixpenny stamp upon it, but what purpose? It might suit every purpose that is desired, and it might not—if you have money to lose it is more likely to serve the purpose of litigation. We must not lose sight of the fact that in most of these cases we are dealing with men who have all to gain and nothing to lose, while we are in the reverse position.

The idea I have shadowed forth should be carefully drawn up, not by any solicitor but by one of experience in such matters, and the money consideration—as you, Mr. Editor, remark—must be reasonable,

and the usual way to assess it is to deal with it as you would the purchase of a partnership concern—say two or three years' purchase would not be considered unreasonable with an introduction to a going concern, and you would not be exposed to the chance of what view this or that judge or Court might take of it. You would simply sue for the fulfilment of an equitable contract—"value received," to put it practically. Say the practice returns at the time the contract is made £2,000 per annum, two years' purchase £4,000, half that amount is £2,000 to be paid by instalments as agreed (reasonable), you sue on each instalment as they become due with arrears and costs, &c., and no jury is required to assess damages, &c.

I remain, faithfully yours,  
R F. H. KING.

### Dental Rubbers.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—On the occasion of the Annual Meeting of the Italian Odontological Society held in Turin on the 1st and 2nd of last month, I read an account of some experiments that, with the assistance of my son, Mr. Stanley C. Bright, L.D.S., a late student of the Dental and Charing Cross Hospitals, I had undertaken to demonstrate the relative value as a base of some of the dental rubbers at present in use by the different members of our profession. The result of these experiments having been received with great interest by our Italian colleagues, may also be of service to our English brethren. If you are of that opinion will you kindly spare room for the details in next issue of the JOURNAL OF THE BRITISH DENTAL ASSOCIATION.

The object of our investigations was to ascertain the quality best adapted to resist fracture and change of form when subjected to any accidental fall or force tending to bend or modify the original form given to the said plates.

We experimented on thirteen varieties, and as the main object was to ascertain the qualities of elasticity and toughness, we excluded from the trials the white and pink varieties, confining ourselves entirely to the kinds that would be used for making the base of the different dental appliances; it being a well-known fact that the pink and white varieties, especially the former, are unmistakably brittle and lacking in elasticity.

The different rubbers were all vulcanised strictly in accordance with the manufacturer's directions, viz., all being kept at a temperature of 315° Fah. for seventy-five minutes with the exception of Johnson and Lund's, which was vulcanised at 320° for fifty-five minutes. Forty minutes were employed in raising the temperature to vulcanising point, and when finished, the vulcaniser was allowed to cool down naturally, before attempting to open the same, the flasks not being disturbed until quite cold. The strips of rubber were vulcanised in plaster, the



same as should be done if actually being used for a denture. We made use of one of Ash's vulcanisers, the gas supply being regulated by one of Gattrell's gauges almost new, and controlled by a delicate chemical thermometer immersed in the usual mercury socket, so that we were quite sure that the exact temperature was strictly maintained throughout without any variation.

The strips of rubber were all reduced to absolutely the same thickness by being fitted in a gauge formed by cementing thin microscope slides on a sheet of plate glass, and after placing the vulcanised slips in the vacancies left between the micro slides, the rubber was reduced by filing and scraping to the exact level of the said slides, after which they were carefully polished. The strips, when finished, measured exactly one millimetre in thickness, one centimetre in width, and seven centimetres long, or  $0.07 \times 0.01 \times 0.001$ .

We made the testing apparatus as follows:—On a wooden base  $0.20 \times 0.12$ , a semicircle with radius of 0.06 was traced and divided in degrees, a clamp being fixed in the middle of the diameter; in this clamp the vulcanised strip was firmly fixed, leaving exactly 0.06 free, and to this free end was fitted a small metal cap with a ring, attached to which was a silk cord, passing round and over two small pulleys, fitted at one end of the wooden base board in such a manner that traction being applied to the silk cord, the free end of the vulcanised rubber strip was made to travel over the graduated semi-circle, thus ascertaining the extreme limit to which the rubber might be bent without destroying its original form, or, in other words, without interfering with its capacity to return to its pristine condition on removal of the tractive force.

The same apparatus was used for testing the breaking strain, the pulleys being removed from their first position, and placed slightly beyond the end of the graduated semicircle, and a weight of one kilogramme (about thirty-six ounces) attached to the end of the silk cord. The result of these experiments demonstrates that Ash's Whalebone Rubber No. 1. is decidedly the best for general work, its elasticity being the highest of any of the thirteen specimens, not excepting even the Original Black, hitherto considered as the strongest rubber known for dental purposes, inasmuch as it contains less foreign matter than any of the other varieties; and although the *breaking* strain of No. 1 Whalebone was somewhat lower than some other specimens, coming after Whalebone No. 2 in this respect, yet it stood a test *far beyond* what would ever be likely to occur in actual practice. In justice to the other qualities, however, it should be noted that all, with one exception, withstood strains to which they would hardly be subject in ordinary use.

The Original Black, although the strongest, has the disadvantage of being rather troublesome to pack. The Improved Black (?) is only improved in colour, such improvement having been obtained by a sacrifice of strength.

For next meeting we hope to present result of experiments showing the deteriorating effect of hasty vulcanising and over vulcanising, which two faults have no doubt been the cause of the complaints made the last few years as to the falling off in quality of rubber. It is not fair to the manufacturers to violate their instructions, and then complain of the result. In almost every case where the maker's instructions have been carried out, a satisfactory result has been obtained.

We take this opportunity of thanking Messrs. Ash and Sons, Messrs. Jamieson, Mr. Doherty, and Messrs. S. S. White and Co., and those colleagues who kindly furnished us with samples of the different rubbers; and we would also tender our warmest thanks, together with those of all members of our Society, present at the meeting at Turin, to the following gentlemen who obligingly loaned me a selection of microscopic slides—D. E. Caush, Esq., G. G. Campion, Esq., H. E. Sewill, Esq., C. West, Esq., T. Charters White, Esq.

These slides evoked great interest, and were much admired, as was also the album of micro-photographs favoured by the last-named gentleman. I should have liked to have added a short account of our Society, and what was done at its meeting, but I feel I have already encroached too much on your space, but if you will allow me I will trespass on your courtesy in next month's issue, as I dare say many of our profession in England might be pleased to hear that progress is taking place in other countries.


I remain, yours very truly,

CHARLES BRIGHT, L.D.S.Eng.


35, *Via SS. Giacomo e Filippo*,  
Genoa, Dec. 2, 1890.

#### EXPERIMENT NO. 1.—FOR ELASTICITY.

Extreme limit of angle to which the strip of rubber could be bent without taking a set, or, in other words, the angle, which after passing, it no longer returned to its original form.

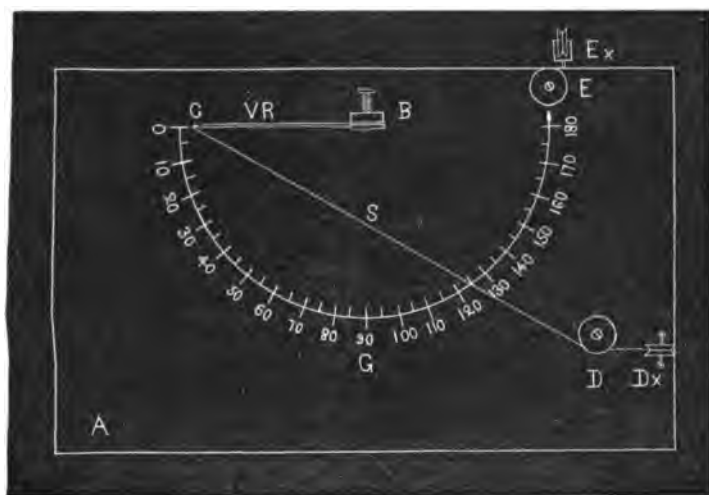
Quality of Rubber.	Manufacturer.	Limit of Angle.
1. Ash's Whalebone, No. 1.	Ash & Sons ... ..	90°
2. „ Original Black ... ..	Ash & Sons ... ..	80°
3. Samson Rubber ... ..	Eugene Doherty ... ..	75°
4. W. „ ... ..	Ash & Sons ... ..	72° 5'
5. Bow Spring ... ..	S. S. White ... ..	70°
6. Horn Rubber ... ..	Jamieson ... ..	65°
7. Whalebone, No. 2. ... ..	Ash & Sons ... ..	60°
8. Extra Tough ... ..	Johnson & Lund ... ..	60°
9. Improved Black (?) ... ..	Ash & Sons ... ..	55°
10. Red Dental Rubber ... ..	Ash & Sons ... ..	55°
11. Justi's ... ..	Justi... ..	55°
12.  ... ..	Ash & Sons ... ..	50°
13. Dental Gum ... ..	S. S. White ... ..	50°

## EXPERIMENT NO. 2.—BREAKING STRAIN.

Quality of Rubber.				Began to Crack.	Broke.
{	1.	Original Black	...	200°	210°
	2.	Bow Spring...	...	195°	200°
	3.	Samson	...	195°	(with difficulty). 200°
	4.	Horn	...	190°	195°
	5.	Extra Tough	...	190°	195°
{	6.		...	190°	195°
	7.	Red Rubber ..	...	190°	195°
	8.	W. „	...	190°	192.5°
{	9.	Improved (?) Black...	...	185°	190°
	10.	Whalebone, No. 2	...	180°	185°
	11.	„ No. 1	...	175°	180°
	12.	Justi	...	175°	180°
	13.	Dental Gum...	...	90°	100°

In all the above a weight of 1 kilogramme, about 36 ounces, was attached to the end of the silk cord.

## SKETCH OF APPARATUS USED IN TESTING VULCANIZED RUBBER.



A.—Base board, 20 centimetres by 12.

B.—Screw clamp, in which is fixed firmly the rubber slip VR, leaving exactly 6 centimetres free to end C, to which is fitted small brass cap with eye holding silk cord, S, passing over pulleys D and Dx.

D.—Horizontal pulley.

Dx.—Vertical pulley fixed in a free vertical axis.

E and Ex.—Same pulleys shifted to position for ascertaining breaking strain, enabling the strip to be bent double.

G.—Graduated arc.

S.—Silk cord.

VR.—Strip of vulcanized rubber under experiment.

### A Suggestion.

TO THE EDITOR OF "THE JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—For the information and advancement of the dental profession and the honour of the British Dental Association, would it not be possible as well as advisable to raise a fund for the purpose of defraying the expenses of one or two qualified dentists, to be commissioned by a committee to make a tour of the world, visiting such places as might be previously agreed upon, in order to collect information as to the methods employed by dentists, Chinese, Japanese, &c., &c., the comparative number practising in different towns (not including the British Isles), and all matters of dental interest. A well-tabulated record of such information would be invaluable to dentists in search of a locality to establish themselves.

The two dentists should, of course, be provided with the necessary credentials and letters supplied by some dental authorities, heads of colleges, examiners, or leading members of the profession.

The length of tour and time employed, would of course depend on the amount subscribed—£400 or £500 going a long way. The information thus collected could be published in this Journal, or sold separately to the profession at a nominal cost.

Volunteers from the ranks of the younger members would, I am sure, not be wanting, and two men could be elected according to their practical worth. Hoping you will find room for this suggestion,

I remain, dear Sir,

A MEMBER OF THE B.D.A.

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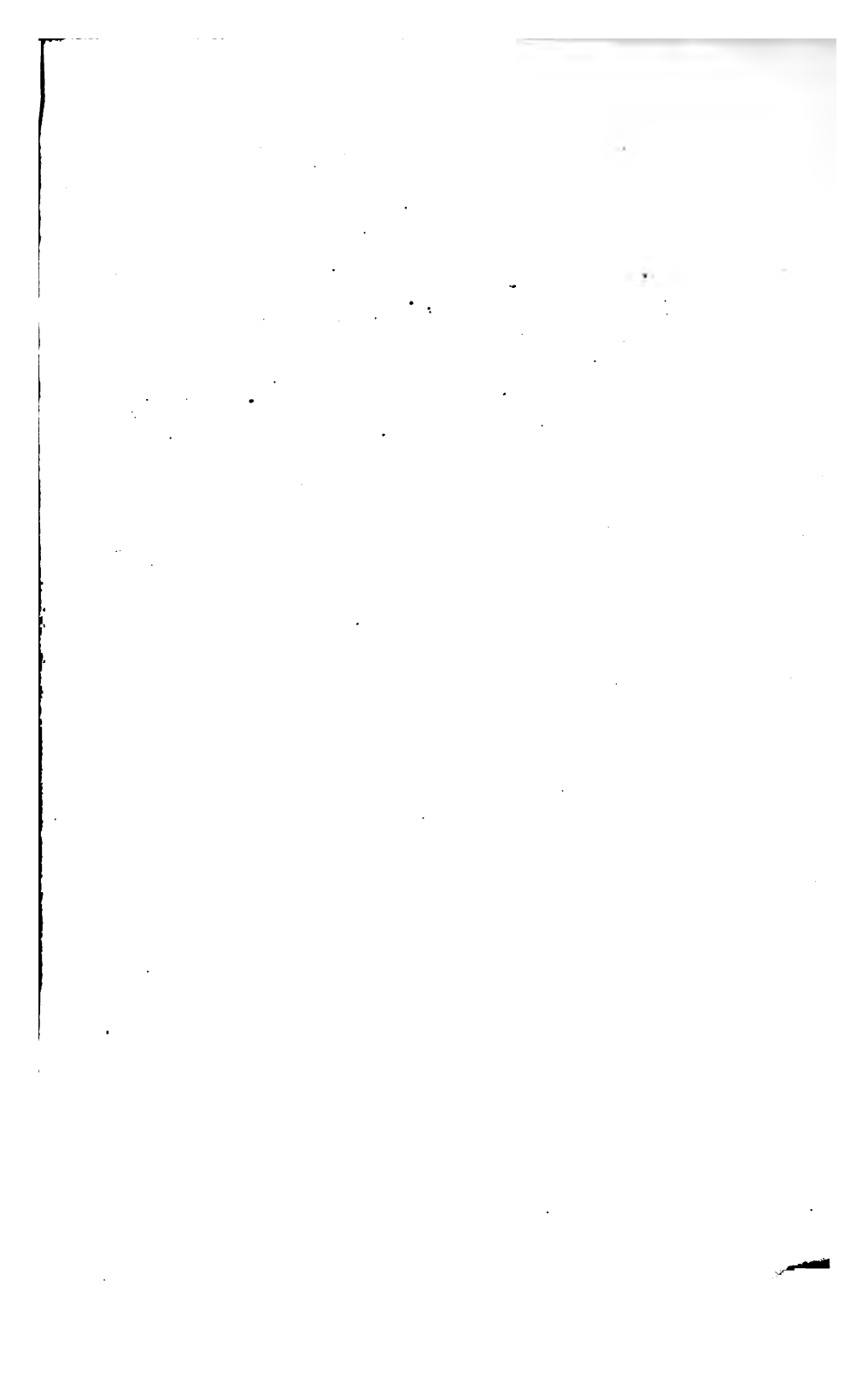
NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.











1 GAL 230

1 gal

265 +

